# MEPS HC-016B: 1997 DENTAL VISITS

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Agency for Healthcare Research and Quality Center for Cost and Financing Studies

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#### A. Data Use Agreement

Individual identifiers have been removed from the microdata contained in the files on this CD-ROM. Nevertheless, under sections 308 (d) and 903 (c) of the Public Health Service Act (42 U.S.C. 242m and 42 U.S.C. 299 a-1), data collected by the Agency for Healthcare Research and Quality (AHRQ) and/or the National Center for Health Statistics (NCHS) may not be used for any purpose other than for the purpose for which they were supplied; any effort to determine the identity of any reported cases, is prohibited by law.

Therefore in accordance with the above referenced Federal statute, it is understood that:

- 1. No one is to use the data in this data set in any way except for statistical reporting and analysis.
- 2. If the identity of any person or establishment should be discovered inadvertently, then (a) no use will be made of this knowledge, (b) the Director, Office of Management, AHRQ will be advised of this incident, (c) the information that would identify any individual or establishment will be safeguarded or destroyed, as requested by AHRQ, and (d) no one else will be informed of the discovered identity.
- 3. No one will attempt to link this data set with individually identifiable records from any data sets other than the Medical Expenditure Panel Survey or the National Health Interview Survey.

By using these data you signify your agreement to comply with the above-stated statutorily based requirements, with the knowledge that deliberately making a false statement in any matter within the jurisdiction of any department or agency of the Federal Government violates 18 U.S.C. 1001 and is punishable by a fine of up to \$10,000 or up to 5 years in prison.

The Agency for Healthcare Research and Quality requests that users cite AHRQ and the Medical Expenditure Panel Survey as the data source in any publications or research based upon these data.

#### B. Background

This documentation describes one in a series of public use files from the Medical Expenditure Panel Survey (MEPS). The survey provides an extensive data set on the use of health services and health care in the United States.

MEPS is conducted to provide nationally representative estimates of health care use, expenditures, sources of payment, and insurance coverage for the U.S. civilian noninstitutionalized population. MEPS also includes a nationally representative survey of nursing homes and their residents. MEPS is cosponsored by the Agency for Healthcare Research and Quality (AHRQ) (formerly the Agency for Health Care Policy and Research (AHCPR)) and the National Center for Health Statistics (NCHS).

MEPS comprises four component surveys: the Household Component (HC), the Medical Provider Component (MPC), the Insurance Component (IC), and the Nursing Home Component (NHC). The HC is the core survey, and it forms the basis for the MPC sample and part of the IC sample. The separate NHC sample supplements the other MEPS components. Together these surveys yield comprehensive data that provide national estimates of the level and distribution of health care use and expenditures, support health services research, and can be used to assess health care policy implications.

MEPS is the third in a series of national probability surveys conducted by AHRQ on the financing and use of medical care in the United States. The National Medical Care Expenditure Survey (NMCES, also known as NMES-1) was conducted in 1977. The National Medical Expenditure Survey (NMES-2) was conducted in 1987. Beginning in 1996, MEPS continues this series with design enhancements and efficiencies that provide a more current data resource to capture the changing dynamics of the health care delivery and insurance system.

The design efficiencies incorporated into MEPS are in accordance with the Department of Health and Human Services (DHHS) Survey Integration Plan of June 1995, which focused on consolidating DHHS surveys, achieving cost efficiencies, reducing respondent burden, and enhancing analytical capacities. To accommodate these goals, new MEPS design features include linkage with the National Health Interview Survey (NHIS), from which the sampling frame for the MEPS HC is drawn, and continuous longitudinal data collection for core survey components. The MEPS HC augments NHIS by selecting a sample of NHIS respondents, collecting additional data on their health care expenditures, and linking these data with additional information collected from the respondents' medical providers, employers, and insurance providers.

#### 1.0 Household Component

The MEPS HC, a nationally representative survey of the U.S. civilian noninstitutionalized population, collects medical expenditure data at both the person and household levels. The HC collects detailed data on demographic characteristics, health conditions, health status, use of

medical care services, charges and payments, access to care, satisfaction with care, health insurance coverage, income, and employment.

The HC uses an overlapping panel design in which data are collected through a preliminary contact followed by a series of five rounds of interviews over a 2½-year period. Using computer-assisted personal interviewing (CAPI) technology, data on medical expenditures and use for two calendar years are collected from each household. This series of data collection rounds is launched each subsequent year on a new sample of households to provide overlapping panels of survey data and, when combined with other ongoing panels, will provide continuous and current estimates of health care expenditures.

The sampling frame for the MEPS HC is drawn from respondents to NHIS, conducted by NCHS. NHIS provides a nationally representative sample of the U.S. civilian noninstitutionalized population, with oversampling of Hispanics and blacks.

# 2.0 Medical Provider Component

The MEPS MPC supplements and validates information on medical care events reported in the MEPS HC by contacting medical providers and pharmacies identified by household respondents. The MPC sample includes all hospitals, hospital physicians, home health agencies, and pharmacies reported in the HC. Also included in the MPC are all office-based physicians who:

- were identified by the household respondent as providing care for HC respondents receiving Medicaid.
- were selected through a 75-percent sample of HC households receiving care through an HMO (health maintenance organization) or managed care plan.
- were selected through a 25-percent sample of the remaining HC households.

Data are collected on medical and financial characteristics of medical and pharmacy events reported by HC respondents, including:

- Diagnoses coded according to ICD-9-CM (9th Revision, International Classification of Diseases) and DSM-IV (Fourth Edition, *Diagnostic and Statistical Manual of Mental Disorders*).
- Physician procedure codes classified by CPT-4 (Common Procedure Terminology, Version 4).
- Inpatient stay codes classified by DRGs (diagnosis-related groups).

- Prescriptions coded by national drug code (NDC), medication name, strength, and quantity dispensed.
- Charges, payments, and the reasons for any difference between charges and payments.

The MPC is conducted through telephone interviews and mailed survey materials. In some instances, providers sent medical and billing records which were abstracted into the survey instruments.

# 3.0 Insurance Component

The MEPS IC collects data on health insurance plans obtained through employers, unions, and other sources of private health insurance. Data obtained in the IC include the number and types of private insurance plans offered, benefits associated with these plans, premiums, contributions by employers and employees, eligibility requirements, and employer characteristics.

Establishments participating in the MEPS IC are selected through four sampling frames:

- A list of employers or other insurance providers identified by MEPS HC respondents who report having private health insurance at the Round 1 interview.
- A Bureau of the Census list frame of private-sector business establishments.
- The Census of Governments from Bureau of the Census.
- An Internal Revenue Service list of the self-employed.

To provide an integrated picture of health insurance, data collected from the first sampling frame (employers and insurance providers) are linked back to data provided by the MEPS HC respondents. Data from the other three sampling frames are collected to provide annual national and State estimates of the supply of private health insurance available to American workers and to evaluate policy issues pertaining to health insurance.

The MEPS IC is an annual survey. Data are collected from the selected organizations through a prescreening telephone interview, a mailed questionnaire, and a telephone follow up for nonrespondents.

# 4.0 Nursing Home Component

The 1996 MEPS NHC was a survey of nursing homes and persons residing in or admitted to nursing homes at any time during calendar year 1996. The NHC gathered information on the demographic characteristics, residence history, health and functional status, use of services, use of

prescription medicines, and health care expenditures of nursing home residents. Nursing home administrators and designated staff also provided information on facility size, ownership, certification status, services provided, revenues and expenses, and other facility characteristics. Data on the income, assets, family relationships, and care-giving services for sampled nursing home residents were obtained from next-of-kin or other knowledgeable persons in the community.

The 1996 MEPS NHC sample was selected using a two-stage stratified probability design. In the first stage, facilities were selected; in the second stage, facility residents were sampled, selecting both persons in residence on January 1, 1996, and those admitted during the period January 1 through December 31.

The sample frame for facilities was derived from the National Health Provider Inventory, which is updated periodically by NCHS. The MEPS NHC data were collected in person in three rounds of data collection over a 1½-year period using the CAPI system. Community data were collected by telephone using computer-assisted telephone interviewing (CATI) technology. At the end of three rounds of data collection, the sample consisted of 815 responding facilities, 3,209 residents in the facility on January 1, and 2,690 eligible residents admitted during 1996.

# 5.0 Survey Management

MEPS data are collected under the authority of the Public Health Service Act. They are edited and published in accordance with the confidentiality provisions of this act and the Privacy Act. NCHS provides consultation and technical assistance.

As soon as data collection and editing are completed, the MEPS survey data are released to the public in staged releases of summary reports and microdata files. Summary reports are released as printed documents and electronic files. Microdata files are released on CD-ROM and/or as electronic files.

Printed documents and CD-ROMs are available through the AHRQ Publications Clearinghouse. Write or call:

AHRQ Publications Clearinghouse
Attn: (publication number)
P.O. Box 8547
Silver Spring, MD 20907
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410/381-3150 (callers outside the United States only)
888/586-6340 (toll-free TDD service; hearing impaired only)

Be sure to specify the AHRQ number of the document or CD-ROM you are requesting. Selected electronic files are available from the Internet on the MEPS web site: <a href="http://www.meps.ahrq.gov/">http://www.meps.ahrq.gov/</a>.

Additional information on MEPS is available from the MEPS project manager or the MEPS public use data manager at the Center for Cost and Financing Studies, Agency for Healthcare Research and Quality.

# C. Technical and Programming Information

#### 1.0 General Information

This documentation describes one in a series of public use event files from the 1997 Medical Expenditure Panel Survey Household (HC) and Medical Provider Components(MPC). Released as an ASCII data file and SAS transport file, this public use file provides detailed information on dental events for a nationally representative sample of the civilian noninstitutionalized population of the United States and can be used to make estimates of dental event utilization and expenditures for calendar year 1997. This file consists of MEPS survey data obtained in the 1997 portion of Round 3 and Rounds 4 and 5 for Panel 1, as well as Rounds 1,2 and the 1997 portion of Round 3 for Panel 2 (i.e, the rounds for the MEPS panels covering calendar year 1997). Each record on this event file represents a unique dental event; that is, a dental event reported by the household respondent.

Data from this event file can be merged with other MEPS HC data files, for the purposes of appending person characteristics such as demographic or health insurance coverage to each dental event record.

Counts of dental event utilization are based entirely on household reports. Dental events were not included in the MPC, therefore all expenditure and payment data are reported by the household.

This file can be also used to construct summary variables of expenditures, sources of payment, and related aspects of the dental event. Aggregate annual person-level information on the use of dental events and other health services use will be provided on a public use file where each record represents a MEPS sampled person.

The following documentation offers a brief overview of the types and levels of data provided, the content and structure of the files and the codebooks. It contains the following sections:

Data File Information
Sample Weights and Variance Estimation Variables
Merging MEPS Data Files
References
Codebook
Variable to Source Crosswalk

For more information on MEPS HC survey design see S. Cohen, 1997; J. Cohen, 1997; and S. Cohen, 1996. For information on the MEPS MPC design, see S. Cohen, 1998. A copy of the survey instrument used to collect the information on this file is available on the MEPS web site at the following address: <a href="http://www.meps.ahrq.gov">http://www.meps.ahrq.gov</a>>.

#### 2.0 Data File Information

This public use data set consists of two event-level data files. File 1 contains characteristics associated with the dental event and imputed expenditure data. File 2 contains pre-imputed expenditure data from the Household Component for all dental events on File 1. Please see Section 2.5.4 for definitions of imputed, and pre-imputed expenditure variables.

Both Files 1 and 2 of this public use data set contain 31,194 dental event records. Of the 31,194, dental event records, 30,558 are associated with persons having a positive person-level weight (WTDPER97). This file includes dental event records for all household survey respondents who resided in eligible responding households and reported at least one dental event. Each record represents one household-reported dental event that occurred during calendar year 1997. Dental visits known to have occurred after December 31, 1997 are not included on this file. Some household respondents may have multiple dental events and thus will be represented in multiple records on this file. Other household respondents may have reported no dental events and thus will have no records on this file. These data were collected during the 1997 portion of round 3, and rounds 4 and 5 for Panel 1, as well as rounds 1, 2, and the 1997 portion of round 3 for Panel 2 of the MEPS HC. The persons represented on this file had to meet either (a) or (b) below:

- a) Be classified as a key in-scope person who responded for his or her entire period of 1997 eligibility (i.e., persons with a positive 1997 full-year person-level sampling weight (WTDPER97 > 0)), or
- b) Be classified as either an eligible non-key person or an eligible out-of-scope person who responded for his or her entire period of 1997 eligibility, and belonged to a family (i.e., all persons with the same value for a particular FAMID) in which all eligible family members responded for their entire period of 1997 eligibility, and at least one family member had a positive 1997 full-year person weight (i.e., eligible non-key or eligible out-of-scope persons who are members of a family all of whose members have a positive 1997 full-year family-level weight).

Please refer to Attachment 1 for definitions of key, non-key, in-scope and eligible. Each dental event record on this file includes the following: date of the dental event; type of provider seen, if visit was due to an accident; reason for dental event; procedure(s) associated with the dental event; whether or not medicines were prescribed; flat fee information; imputed sources of payment; total payment and total charge of the dental event expenditure; and a full-year person-level weight.

File 2 of this public use data set is intended for analysts who want to perform their own imputations to handle missing data. This file consists of one set of pre-imputed expenditure information from the Household Component. Expenditure data have been subject to minimal logical editing that accounted for outliers, copayments or charges reported as total payments, and reimbursed amounts that were reported as out of pocket payments. In addition, edits were implemented to correct for misclassifications between Medicare and Medicaid and between

Medicare HMO's and private HMO's as payment sources. However, missing data were not imputed.

Data from these files can be merged with previously released 1997 MEPS HC person level data using the unique person identifier, DUPERSID, to append person characteristics such as demographic or health insurance characteristics to each record. Dental events can also be linked to the MEPS 1997 Prescribed Medicine File. Please see section 5.0 for details on how to link MEPS data files.

Panel 1 cases (PANEL97 = 1 on 1997 person level file) can also be linked back to the 96 MEPS HC public use data files. However, the user should be aware that at this time no weight is being provided to facilitate 2 year analysis of panel 1 data.

#### 2.1 Codebook Structure

For each variable on these files, both weighted and unweighted frequencies are provided. The codebook and data file sequence list variables in the following order:

#### File 1

Unique person identifiers
Unique dental event identifiers
Other survey administration variables
Dental characteristics
Imputed expenditure variables
Weight and variance estimation variables

#### File 2

Unique person identifiers
Unique dental event identifiers
Pre-imputed expenditure variables

#### 2.2 Reserved Codes

The following reserved code values are used:

Value	Definition
-1 INAPPLICABLE	Question was not asked due to skip pattern.
-7 REFUSED	Question was asked and respondent refused to answer question.
-8 DK	Question was asked and respondent did not know answer.
-9 NOT ASCERTAINED	Interviewer did not record the data.

D - ('-- '4' - --

Generally, values of -1,-7, -8, and -9 have not been edited on this file. The values of -1 and -9 can be edited by analysts by following the skip patterns in the questionnaire.

#### 2.3 Codebook Format

This codebook describes an ASCII data set (although the data are also being provided in a SAS transport file). The following codebook items are provided for each variable:

dentifier	Description
Name	Variable name (maximum of 8 characters)
Description	Variable descriptor (maximum of 40 characters)
Format	Number of bytes
Гуре	Type of data: numeric (indicated by NUM) or character (indicated
	by CHAR)
Start	Beginning column position of variable in record
End	Ending column position of variable in record
Name Description Format Type Start	Variable name (maximum of 8 characters) Variable descriptor (maximum of 40 characters) Number of bytes Type of data: numeric (indicated by NUM) or character (indicated by CHAR) Beginning column position of variable in record

#### 2.4 Variable Naming

In general, variable names reflect the content of the variable, with an 8 character limitation. For questions asked in a specific round, the end digit in the variable name reflects the round in which the question was asked. All imputed/edited variables end with an "X."

#### 2.4.1 General

Variables contained on Files 1 and 2 were derived from the HC questionnaire. The source of each variable is identified in the Section E, entitled, "Variable - Source Crosswalk". Sources for each variable are indicated in one of four ways: (1) variables which are derived from CAPI or assigned in sampling are so indicated; (2) variables which come from one or more specific questions have those numbers and the questionnaire section indicated in the "Source" column; (3) variables constructed from multiple questions using complex algorithms are labeled "Constructed" in the "Source" column; and (4) variables which have been imputed are so indicated

#### 2.4.2 Expenditure and Sources of Payment Variables

Pre-imputed and imputed versions of the expenditure and sources of payment variables are provided on 2 separate files. Variables on Files 1 and 2 follow a standard naming convention and are 8 characters in length. Please note that pre-imputed means that a series of logical edits have been performed on the variable but missing data remain. The imputed versions incorporate the same edits but also have undergone an imputation process to account for missing data.

The pre-imputed expenditure variables on File 2 end with an "H" indicating that the data source was the MEPS Household Component. All imputed variables on File 1 end with an "X" indicating they are fully edited and imputed.

The total sum of payments, 12 sources of payment variables, and total charge variables are named consistently in the following way:

The first two characters indicate the type of event:

IP - inpatient stay

ER - emergency room visit

HH - home health visit

OB - office-based visit

OP - outpatient visit

DV - dental visit

OM - other medical equipment RX - prescribed medicine

In the case of the source of payment variables, the third and fourth characters indicate:

SF - self or family OF - other Federal Government XP - sum of payments

MR - Medicare SL - State/local government MD - Medicaid WC - Worker's Compensation

PV - private insurance
VA - Veterans
CH - CHAMPUS/CHAMPVA
OT - other insurance
OR - other private
OU - other public

The fifth and sixth characters indicate the year (97). The seventh character indicates whether or not the variable was edited/imputed (ends with 'X') or reported by the household (ends in 'H').

For example: DVSF97X is the edited/imputed amount paid by self or family for 1997 dental expenditures.

#### 2.5 File 1 Contents

# 2.5.1 Survey Administration Variables

#### 2.5.1.1 Person Identifiers (DUID - DUPERSID)

The dwelling unit ID (DUID) is a 5-digit random number assigned after the case was sampled for MEPS. The 3-digit person number (PID) uniquely identifies each person within the dwelling unit. The 8-character variable DUPERSID uniquely identifies each person represented on the file and is the combination of the variables DUID and PID. For detailed information on dwelling units and families, please refer to attachment 1.

## 2.5.1.2 Record Identifiers (EVNTIDX, FFEEIDX, EVENTRN)

EVNTIDX uniquely identifies each event (i.e., each record on the file) and is the variable required to link events to data files containing details on conditions and/or prescribed medicines. For details on linking see Section 5.0.

FFEEIDX uniquely identifies a flat fee group, that is, all events that were part of a flat fee payment situation. For example, a charge for orthodontia is typically covered in a flat fee arrangement where all visits are covered under one flat fee dollar amount. These events have the same value for FFEEIDX. FFEEIDX identifies a flat fee payment situation that was identified using information from the Household Component. Please note that FFEEIDX should be used to link up all MEPS event files (excluding prescribed medicines) in order to determine the full set of events that are part of a flat fee group.

EVENTRN indicates the round in which the dental event was first reported. Please note: Rounds 3, 4, and 5 are associated with MEPS survey data collected from Panel 1. Likewise, Rounds 1, 2, and 3 are associated with data collected from Panel 2.

#### 2.5.2 Characteristics of Dental Events

## 2.5.2.1 Date of Dental Visit (DVDATEYR - DVDATEDD)

File 1 contains variables describing dental events reported by household respondents in the Dental Section of the MEPS HC questionnaire. There are three variables which indicate the day, month and year a dental event occurred (DVDATEDD, DVDATEMM, DVDATEYR, respectively). These variables have not been edited or imputed.

## 2.5.2.2 Type of Provider Seen (GENDENT - DENTYPE)

Respondents were asked about the type of provider seen during the visit, e.g. general dentist, dental hygienist, or orthodontist. More than one type of provider may have been identified on an event record.

# 2.5.2.3 Treatment, Procedures, and Services (EXAMINE - DENTMED)

Respondents were asked about the types of services or treatments they received during the visit (EXAMINE - TMDTMJ), such as root canal or x-rays, and whether or not the visit was because of an accident (DENTINJ). More than one type of service or treatment may have been identified on an event record. Some procedures or services identified in DENTOTHR as "Dental services other specify" have been edited to appropriate procedure and service categories. Both the edited and unedited versions of these variables are included on this file. DENTMED indicates whether or not the respondent received a prescription medication, including free samples, during the dental visit.

#### 2.5.2.4 Record Count Variable (NUMCOND)

The variable NUMCOND indicates the total number of records that can be linked from the Medical Conditions file to each dental event.

#### 2.5.3 Flat Fee Variables

#### 2.5.3.1 Definition of Flat Fee Payments

A flat fee is the fixed dollar amount a person is charged for a package of services provided during a defined period of time. Examples would be an orthodontist's fee which covers multiple visits; or a dental surgeon's fee covering surgical procedure and post-surgical care. A flat fee group is the set of medical services that are covered under the same flat fee payment situation. The flat fee groups represented on this file, includes flat fee groups where at least one of the health care events, as reported by the HC respondent, occurred during 1997. By definition a flat fee group can span multiple years and a single person can have multiple flat fee groups.

#### 2.5.3.2 Flat Fee Variable Descriptions

There are several variables on this file that describe a flat fee payment situation and the number of medical events that are part of a flat fee group. As noted previously, for a person, the variable FFEEIDX can be used to identify all events, that are part of the same flat fee group. To identify such events, FFEEIDX should be used to link events from all 1997 MEPS event files (excluding prescribed medicines). For the dental events that are not part of a flat fee payment situation, the flat fee variables described below are all set to inapplicable (-1).

## 2.5.3.3 Flat Fee Type (FFDVTYPE)

FFDVTYPE indicates whether the 1997 dental event is the "stem" or "leaf" of a flat fee group. A stem (records with FFDVTYPE = 1) is the initial medical service (event) which is followed by other medical events that are covered under the same flat fee payment. The leaves of the flat fee group (records with FFDVTYPE = 2) are those medical events that are tied back to the initial medical event (the stem) in the flat fee group.

#### 2.5.3.4 Counts of Flat Fee Events that Cross Years (FFBEF97 – FFTOT98)

As described above, a flat fee payment situation covers multiple events and the multiple events could span multiple years. For situations where a 1997 dental visit is part of a group of events, and some of the events occurred before or after 1997, counts of the known events are provided on the dental record. Indicator variables are provided if some of the events occurred before or after 1997. These variables are:

FFBEF97 -- total number of pre-1997 events in the same flat fee group as the 1997 dental event. This count would not include 1997 dental events.

FFTOT98 -- indicates whether or not there are 1998 medical events in the same flat fee group as the 1997 dental event record.

# 2.5.3.5 Caveats of Flat Fee Groups

The user should note that flat fee payment situations are common with respect to dental events. There are 5,955 dental events that are identified as being part of a flat fee payment group.

In general, every flat fee group should have an initial visit (stem) and at least one subsequent visit (leaf). There are some situations where this is not true. For some of these flat fee groups, the initial visit reported occurred in 1997 but the remaining visits that were part of this flat fee group occurred in 1998. In this case, the 1997 flat fee group represented on this file would consist of one event (the stem). The 1998 events that are part of this flat fee group are not represented on the file. Similarly, the household respondent may have reported a flat fee group where the initial visit began in 1996 but subsequent visits occurred during 1997. In this case, the initial visit would not be represented on the file. This 1997 flat fee group would then only consist of one or more leaf records and no stem.

# 2.5.4 Expenditure Data

#### 2.5.4.1 Definition of Expenditures

Expenditures on files 1 and 2 refer to what is paid for dental services. More specifically, expenditures in MEPS are defined as the sum of payments for care received, including out of pocket payments and payments made by private insurance, Medicaid, Medicare and other sources. The definition of expenditures used in MEPS differs slightly from its predecessors: the 1987 NMES and 1977 NMCES surveys where "charges" rather than sum of payments were used to measure expenditures. This change was adopted because charges became a less appropriate proxy for medical expenditures during the 1990's due to the increasingly common practice of discounting. Although measuring expenditures as the sum of payments incorporates discounts in the MEPS expenditure estimates, the estimates do not incorporate any payment not directly tied to specific medical care visits, such as bonuses or retrospective payment adjustments paid by third party payers. Another general change from the two prior surveys is that charges associated with uncollected liability, bad debt, and charitable care (unless provided by a public clinic or hospital) are not counted as expenditures because there are no payments associated with those classifications. While charge data are provided on this file, analysts should use caution when working with this data because a charge does not typically represent actual dollars exchanged for services or the resource costs of those services, nor are they directly comparable to the resource costs of those services, nor are they directly comparable to the expenditures defined in the 1987 NMES (for details on expenditure definitions see Monheit et al, 1999).

## 2.5.4.2 Data Editing/Imputation Methodologies of Expenditure Variables

The general methodology used for editing and imputing expenditure data is described below. Neither the dental events nor other medical expenditures (such as glasses, contact lenses, and hearing devices) were included in the MPC. Therefore, although the general procedures remain the same, for dental and other medical expenditures, editing and imputation methodologies were applied only to household-reported data. Specific methodologies for editing and imputing dental expenditures follows the General Imputation Methodology section.

## 2.5.4.3 General Imputation Methodology

Logical edits were used to resolve internal inconsistencies and other problems in the HC and MPC survey-reported data. The edits were designed to preserve partial payment data from households and providers, and to identify actual and potential sources of payment for each household-reported event. In general, these edits accounted for outliers, copayments or charges reported as total payments, and reimbursed amounts that were reported as out of pocket payments. In addition, edits were implemented to correct for misclassifications between Medicare and Medicaid and between Medicare HMO's and private HMO's as payment sources. These edits produced a complete vector of expenditures for some events, and provided the starting point for imputing missing expenditures in the remaining events.

A weighted sequential hot-deck procedure was used to impute for missing expenditures as well as total charge. The procedure uses survey data from respondents to correct for missing non-respondent data, while preserving the respondents' weighted distribution in the imputation process. Classification variables vary by event type in the hot-deck imputations, but total charge and insurance coverage are key variables in all of the imputations. Separate imputations were performed for nine categories of medical provider care: inpatient hospital stays, outpatient hospital department visits, emergency room visits, visits to physicians, visits to non-physician providers, dental services, home health care by certified providers, home health care by paid independents, and other medical expenses. After the imputations were finished, visits to physician and non-physician providers were combined into a single medical provider file. The two categories of home care also were combined into a single home health file.

# 2.5.4.4 Dental Imputation

Expenditures on visits to dentists were developed in a sequence of logical edits and imputations. The household edits were used to correct obvious errors in the reporting of expenditures, and to identify actual and potential sources of payments. Some of the edits were global (i.e., applied to all events). Others were hierarchical and mutually exclusive. One of the more important edits separated flat fee events from simple events. This edit was necessary because groups of events covered by a flat fee (i.e., a flat fee bundle) were edited and imputed separately from individual events covered by a single charge (i.e., simple events). Dental services were imputed as flat fee events if the charges covered a package of health care services (e.g., orthodontia), and all of the services were part of the same event type (i.e., a pure bundle). If a bundle contained more than

one type of event, the services were treated as simple events in the imputations (See Section 2.5.3 for more detail on the definition and imputation of events in flat fee bundles.)

Logical edits also were used to sort each event into a specific category for the imputations. Events with complete expenditures were flagged as potential donors for the hot-deck imputations, while events with missing expenditure data were assigned to various recipient categories. Each event was assigned to a recipient category based on its pattern of missing data. For example, an event with a known total charge but no expenditures information was assigned to one category, while an event with a known total charge and some expenditures information was assigned to a different category. Similarly, events without a known total charge were assigned to various recipient categories based on the amount of missing data.

The logical edits produced nine recipient categories for events with missing data. Eight of the categories were for events with a common pattern of missing data and a primary payer other than Medicaid. These events were imputed separately because persons on Medicaid rarely know the provider's charge for services or the amount paid by the state Medicaid program. As a result, the total charge for Medicaid-covered services was imputed and discounted to reflect the amount that a state program would pay for the care.

Separate hot-deck imputations were used to impute for missing data in each of the other eight recipient categories. The donor pool included "free events" because, in some instances, providers are not paid for their services. These events represent charity care, bad debt, provider failure to bill, and third party payer restrictions on reimbursement in certain circumstances. If free events were excluded from the donor pool, total expenditures would be over-counted because the cost of free care would be implicitly included in paid events and explicitly included in events that should have been treated as free from provider.

#### 2.5.4.5 Flat Fee Expenditures

The approach used to count expenditures for flat fees was to place the expenditure on the first visit of the flat fee group. The remaining visits have zero payments. Thus, if the first visit in the flat fee group occurred prior to 1997, all of the events that occurred in 1997 will have zero payments. Conversely, if the first event in the flat fee group occurred at the end of 1997, the total expenditure for the entire flat fee group will be on that event, regardless of the number of events it covered after 1997.

#### 2.5.4.6 Zero Expenditures

As noted above, there are some dental events reported by respondents where the payments were zero. This could occur for several reasons including (1) free care was provided, (2) bad debt was incurred, (3) care was covered under a flat fee arrangement beginning in an earlier year, or (4) follow-up visits were provided without a separate charge (e.g. after a surgical procedure). If all of

the dental events for a person fell into one of these categories, then the total annual expenditures for that person would be zero.

#### 2.5.4.7 Sources of Payment

In addition to total expenditures, variables are provided which itemize expenditures according to major source of payment categories. These categories are:

- 1. Out of pocket by user or family
- 2. Medicare
- 3. Medicaid
- 4. Private Insurance
- 5. Veteran's Administration, excluding CHAMPVA
- 6. CHAMPUS or CHAMPVA
- 7. Other Federal sources includes Indian Health Service, Military Treatment Facilities, and other care by the Federal government
- 8. Other State and Local Source includes community and neighborhood clinics, State and local health departments, and State programs other than Medicaid.
- 9. Worker's Compensation
- 10. Other Unclassified Sources includes sources such as automobile, homeowner's, liability, and other miscellaneous or unknown sources.

Two additional source of payment variables were created to classify payments for particular persons that appear inconsistent due to differences between survey questions on health insurance coverage and sources of payment for medical events. These variables include:

- 11. Other Private any type of private insurance payments reported for persons not reported to have any private health insurance coverage during the year as defined in MEPS; and
- 12. Other Public Medicaid payments reported for persons who were not reported to be enrolled in the Medicaid program at any time during the year.

Though relatively small in magnitude, users should exercise caution when interpreting the expenditures associated with these two additional sources of payment. While these payments stem from apparent inconsistent responses to health insurance and source of payment questions in the survey, some of these inconsistencies may have logical explanations. For example, private insurance coverage in MEPS is defined as having a major medical plan covering hospital and physician services. If a MEPS sampled person did not have such coverage but had a single service type insurance plan (e.g. dental insurance) that paid for a particular episode of care, those payments may be classified as "other private". Some of the "other public" payments may stem from confusion between Medicaid and other state and local programs or may be from persons who were not enrolled in Medicaid, but were presumed eligible by a provider who ultimately received payments from the program.

Users should also note that the Other Public and Other private source of payment categories only exist on File 1 for imputed expenditure data since they were created through the editing/imputation process. File 2 reflects source of payment as it was collected through the survey.

### 2.5.4.8 Dental Expenditures (DVFS97X- DVTC97X)

Dental expenditures were obtained only through the Household Component Survey. For cases with missing expenditure data, dental expenditures were imputed using the procedures described above. DVFS97X - DVOT97X are the 12 sources of payment, DVTC97X is the total charge, and DVXP97X is the sum of the 12 sources of payments for the dental expenditure. The 12 sources of payment are: self/family, Medicare, Medicaid, private insurance, Veterans Administration, CHAMPUS/CHAMPVA, other federal, state/local governments, Workman's Compensation, other private insurance, other public insurance and other insurance.

# **2.5.4.9 Rounding**

Expenditure variables on File 1 have been rounded to the nearest penny. Person level expenditure information to be released will be rounded to the nearest dollar. It should be noted that using the MEPS event files to create person level totals will yield slightly different totals than those found on the person level expenditure file. These differences are due to rounding only. Moreover, in some instances, the number of persons having expenditures on the event files for a particular source of payment may differ from the number of persons with expenditures on the person level expenditure file for that source of payment. This difference is also an artifact of rounding only. Please see the 1997 Appendix File for details on such rounding differences.

#### 2.5.4.10 Imputation Flags

The variables IMPDVSLF - IMPDVCHG identify records where the expenditures have been imputed using the methodologies outlined in this document. When a record was identified as being the leaf of a flat fee the values of all imputation flags were set to "0" (not imputed) since they were not included in the imputation process. In cases where an amount is 0 and the imputation flag is 1, the 0 payment is because either it is imputed to be zero or its potential source is imputed as not paying for the service. Therefore the corresponding amount is set to zero.

# 2.6 File 2 Contents: Pre-imputed Expenditure Variables

Pre-imputed expenditure data are provided on file 2. Pre-imputed means that only a series of logical edits were applied to the data to correct for several problems including outliers, copayments or charges reported as total payments, and reimbursed amounts counted as out of pocket payments. Edits were also implemented to correct for misclassifications between Medicare and Medicaid and between Medicare HMO's and private HMO's as payment sources as well as a number of other data inconsistencies that could be resolved through logical edits. This file

contains no imputed data.

Included on File 2 is the variable HHSFFID, which is the original flat fee identifier that was derived during the household interview. This identifier should only be used if the analyst is interested in performing their own expenditure imputation.

The user should note that there are 10 sources of payment variables in the pre-imputed expenditure data, while the imputed expenditure data on File 1 contains 12 sources of payment variables. The additional two sources of payment (which are not reported as separate sources of payment through the data collection) are Other Private and Other Public. These source of payment categories were constructed to resolve apparent inconsistencies between individuals' reported insurance coverage and their sources of payment for specific events. File 2 also includes a variable indicating uncollected liability. Uncollected liability was not used in imputation.

# 3.0 Sample Weights and Variance Estimation Variables (WTDPER97-VARPSU97)

#### 3.1 Overview

There is a single full year person-level weight (WTDPER97) included on this file. A person-level weight was assigned to each dental events reported by a key, in-scope person who responded to MEPS for the full period of time that he or she was in scope during 1997. A key person either was a member of an NHIS household at the time of the NHIS interview, or became a member of such a household after being out-of-scope at the time of the NHIS (examples of the latter situation include newborns and persons returning from military service, an institution, or living outside the United States). A person is in scope whenever he or she is a member of the civilian noninstitutionalized portion of the U.S. population.

# 3.2 Details on Person Weights Construction

The person-level weight WTDPER97 was developed in three stages. A person level weight for panel 2 was created, including both an adjustment for nonresponse over time and poststratification, controlling to Current Population Survey (CPS) population estimates based on five variables. Variables used in the establishment of person-level poststratification control figures included: census region (Northeast, Midwest, South, West); MSA status (MSA, non-MSA); race/ethnicity (Hispanic, black but non-Hispanic, and other); sex; and age. Then a person level weight for Panel 1 was created, again including an adjustment for nonresponse over time and poststratification, again controlling to CPS population estimates based on the same five variables. When poverty status information derived from income variables became available, a 1997 composite weight was formed from the panel 1 and panel 2 weights by multiplying the Panel weights by .5. Then a final poststratification was done on this composite weight variable, including poverty status (below poverty, from 100 to 125 percent of poverty, from 125 to 200 percent of poverty, from 200 to 400 percent of poverty, at least 400 percent of poverty) as well as the original five poststratification variables in the establishment of control totals.

#### 3.2.1 MEPS Panel 1 Weight

The person level weight for MEPS Panel 1 was developed using the 1996 full year weight for an individual as a "base" weight for survey participants present in 1996. For key, inscope respondents who joined an RU some time in 1997 after being out-of-scope in 1996, the 1996 family weight associated with the family the person joined served as a "base" weight. The weighting process included an adjustment for nonresponse over Rounds 4 and 5 as well as poststratification to population control figures for December, 1997. These control figures were derived by scaling back the population totals obtained from the March 1998 CPS to reflect the December, 1997 CPS estimated population distribution across age and sex categories as of December, 1997. Variables used in the establishment of person level poststratification control figures included: census region (Northeast, Midwest, South, West); MSA status (MSA, non-MSA); race/ethnicity (Hispanic, black but non-Hispanic, and other); sex, and age. Overall, the weighted population estimate for the civilian, noninstitutionalized population on December 31, 1997 is 267,704,802. Key, responding persons not inscope on December 31, 1997 but inscope earlier in the year retained, as their final Panel 1 weight, the weight after the nonresponse adjustment.

#### 3.2.2 MEPS Panel 2 Weight

The person level weight for MEPS Panel 2 was developed using the MEPS Round 1 person-level weight as a "base" weight. For key, inscope respondents who joined an RU after Round 1, the Round 1 family weight served as a "base" weight. The weighting process included an adjustment for nonresponse over Round 2 and the 1997 portion of Round 3 as well as poststratification to the same population control figures for December 1997 used for the MEPS Panel 1 weights. The same five variables employed for Panel 1 poststratification (census region, MSA status, race/ethnicity, sex, and age) were used for Panel 2 poststratification. Similarly, for Panel 2, key, responding persons not inscope on December 31, 1997 but inscope earlier in the year retained, as their final Panel 2 weight, the weight after the nonresponse adjustment.

Note that the MEPS round 1 weights (for both panels with one exception as noted below) incorporated the following components: the original household probability of selection for the NHIS; ratio-adjustment to NHIS-based national population estimates at the household (occupied dwelling unit) level; the probability of selection of dwelling units associated with the oversampling of five population domains of analytic interest (for Panel 2 only); adjustment for nonresponse at the dwelling unit level for Round 1; and poststratification to figures at the family and person level obtained from the March 1997 CPS data base. The five oversampled domains for Panel 2 were households with: persons with functional impairments; children with limitations in activity; individuals 18-64 expected to incur high medical expenditures based on a statistical model; persons with family incomes expected to be below 200 percent of poverty based on a statistical model; and adults with other impairments.

## 3.2.3 The Final Weight for 1997

Variables used in the establishment of person level poststratification control figures included: poverty status (below poverty, from 100 to 125 percent of poverty, from 125 to 200 percent of poverty, from 200 to 400 percent of poverty, at least 400 percent of poverty); census region (Northeast, Midwest, South, West); MSA status (MSA, non-MSA); race/ethnicity (Hispanic, black but non-Hispanic, and other); sex, and age. Overall, the weighted population estimate for the civilian, noninstitutionalized population for December 31, 1997 is 267,704,802 (WTDPER97>0 and INSC1231=1). The inclusion of key, inscope persons who were not inscope on December 31, 1997 brings the estimated total number of persons represented by the MEPS respondents over the course of the year up to 271,278,585 (WTDPER97>0). The weighting process included poststratification to population totals obtained from the 1996 MEPS Nursing Home Component for the number of individuals admitted to nursing homes. For the 1996 full year file an additional poststratification was done to population totals obtained from the 1996 Medicare Current Beneficiary Survey (MCBS) for the number of deaths among Medicare beneficiaries experienced in the 1996 MEPS. However, in 1997 the difference between the MEPS and MCBS estimates was not statistically significant, and no adjustment was made.

#### 3.2.4 Coverage

The target population for MEPS in this file is the 1997 U.S. civilian, noninstitutionalized population. However, the MEPS sampled households are a subsample of the NHIS households interviewed in 1995 (Panel 1) and 1996 (Panel 2). New households created after the NHIS interviews for the respective Panels and consisting exclusively of persons who entered the target population after 1995 (Panel 1) or after 1996 (Panel 2) are not covered by MEPS. These would include families consisting solely of: immigrants; persons leaving the military; U.S. citizens returning from residence in another country; and persons leaving institutions. It should be noted that this set of uncovered persons constitutes only a tiny proportion of the MEPS target population.

## 4.0 Strategies for Estimation

This file is constructed for efficient estimation of utilization, expenditure, and sources of payment for dental events and to allow for estimates of number of persons with dental utilization for 1997.

# 4.1 Variables with Missing Values

It is essential that the analyst examine all variables for the presence of negative values used to represent missing values. For example, a record with a value of -8 for the first ICD9 condition code (DVICD1X) indicates that the condition was reported as unknown.

For continuous or discrete variables, where means or totals may be taken, it may be necessary to set minus values to values appropriate to the analytic needs. That is, the analyst should either

impute a value or set the value to one that will be interpreted as missing by the computing language used. For categorical and dichotomous variables, the analyst may want to consider whether to recode or impute a value for cases with negative values or whether to exclude or include such cases in the numerator and/or denominator when calculating proportions.

Methodologies used for the editing/imputation of expenditure variables (e.g. sources of payment, flat fee, and zero expenditures) are described in Section 2.5.4.2.

## 4.2 Basic Estimates of Utilization, Expenditure and Sources of Payment

While the examples described below illustrate the use of event level data in constructing person level total expenditures, these estimates can also be derived from the person level expenditure file unless the characteristic of interest is event specific.

In order to produce national estimates related to dental visits utilization, expenditure and sources of payment, the value in each record contributing to the estimates must be multiplied by the weight (WTDPER97) contained on that record.

#### Example 1:

For example, the total number of dental visits, for the civilian non-institutionalized population of the U.S. in 1997 is estimated as the sum of the weight (WTDPER97) across all dental visit records. That is,

$$\sum W_j = 286,891,834 \tag{1}$$

#### Example 2:

Subsetting to records based on characteristics of interest expands the scope of potential estimates. For example, the estimate for the mean out-of-pocket payment per dental visit should be calculated as the weighted mean of amount paid by self/family. That is,

$$\overline{X} = (\sum W_j X_j)/(\sum W_j) = \$98.57,$$
where
$$\sum W_j = 230,761,058 \text{ and } X_j = \text{DVSF97X}_j \text{ for all records with DVXP97X}_j > 0$$

This gives \$98.57 as the estimated mean amount of out-of-pocket payment of expenditures associated with dental visits and 230,761,058 as an estimate of the total number of dental visits with expenditure. Both of these estimates are for the civilian non-institutionalized population of the U.S. in 1997.

#### Example 3:

Another example would be to estimate the average proportion of total expenditures paid by private insurance per dental visit. This should be calculated as the weighted mean of the proportion of the total dental visit expenditures paid by private insurance at the dental visit level. That is.

$$\overline{Y} = (\sum W_j Y_j)/(\sum W_j) = 0.4665,$$
where
$$\sum W_j = 230,761,058 \text{ and } Y_j = \text{DVPV97X}_j/\text{DVXP97X}_j$$
for all records with DVXP97X<sub>i</sub>>0

This gives 0.4665 as the estimated mean proportion of total expenditures paid by private insurance for dental visits for the civilian non-institutionalized population of the U.S. in 1997.

#### 4.3 Estimates of the Number of Persons with Dental Visits

When calculating an estimate of the total number of persons with dental visits, users can use a person-level file (MEPS HC-020: Person Level Expenditures and Utilization) or this event file. However, this event file must be used when the measure of interest is defined at the event level. For example, to estimate the number of persons in the civilian non-institutionalized population of the U.S., with a dental visit in 1997 because of accident or injury, this event file must be used. This would be estimated as

$$\Sigma W_i X_i$$
 across all unique persons i on this file, (4) where  $W_i$  is the sampling weight (WTDPER97) for person i and  $X_i = 1$  if DENTINJ =1 for any visit of person i

#### 4.4 Person-Based Ratio Estimates

#### 4.4.1 Person-Based Ratio Estimates Relative to Persons with Dental Visits

This file may be used to derive person-based ratio estimates. However, when calculating ratio estimates where the denominator is persons, care should be taken to properly define and estimate the unit of analysis up to person level. For example, the mean expense for persons with dental

visits is estimated as,

$$(\Sigma W_i Z_i)/(\Sigma W_i)$$
 across all unique persons i on this file, (5) where  $W_i$  is the sampling weight (WTDPER97) for person i and  $Z_i = \Sigma \text{ DVXP97X}_i$  across all dental visits for person i

#### 4.4.2 Person-Based Ratio Estimates Relative to the Entire Population

If the ratio relates to the entire population, this file cannot be used to calculate the denominator, as only those persons with at least one dental visit are represented on this data file. In this case MEPS File HC-020, which has data for all sampled persons, must be used to estimate the total number of persons (i.e. those with use and those without use). For example, to estimate the proportion of civilian non-institutionalized population of the U.S. with at least one dental visit due to accident or injury, the numerator would be derived from data on this event file, and the denominator would be derived from data on the MEPS HC-020 person-level file. That is,

$$(\Sigma W_i Z_i)/(\Sigma W_i)$$
 across all unique persons i on the MEPS HC-020 file, (6) where  $W_i$  is the sampling weight (WTDPER97) for person i and  $Z_i = 1$  if DENTINJj =1 for any event of person i on the event-level file = 0 otherwise for all remaining persons on the MEPS HC-020 file

# 4.5 Sampling Weights for Merging Previous Releases of MEPS Household Data with the Current Data File

There have been several previous releases of MEPS Household Survey public use data. Unless a variable name common to several tapes is provided, the sampling weights contained on these data files are file-specific. The file-specific weights reflect minor adjustments to eligibility and response indicators due to birth, death, or institutionalization among respondents.

In general for estimates from a MEPS data file that do not require merging with variables from other MEPS data files, the sampling weight(s) provided on that data file are the appropriate weight(s). When merging a MEPS Household data file to another, the major analytical variable (i.e. the dependent variable) determines the correct sampling weight to use.

#### 4.6 Variance Estimation

To obtain estimates of variability (such as the standard error of sample estimates or corresponding confidence intervals) for estimates based on MEPS survey data, one needs to take into account the complex sample design of MEPS. Various approaches can be used to develop such estimates of variance including use of the Taylor series or various replication methodologies. Replicate weights have not been developed for the MEPS 1997 data. Variables needed to implement a Taylor series estimation approach are described in the paragraph below.

Using a Taylor Series approach, variance estimation strata and the variance estimation PSUs within these strata must be specified. The corresponding variables on the MEPS full year utilization database are VARSTR97 and VARPSU97, respectively. Specifying a "with replacement" design in a computer software package such as SUDAAN (Shah, 1996) should provide standard errors appropriate for assessing the variability of MEPS survey estimates. It should be noted that the number of degrees of freedom associated with estimates of variability indicated by such a package may not appropriately reflect the actual number available. For MEPS sample estimates for characteristics generally distributed throughout the country (and thus the sample PSUs), there are over 100 degrees of freedom associated with the corresponding estimates of variance. The following illustrates these concepts using two examples from section 4.2.

## Example 2 from Section 4.2

Using a Taylor Series approach, specifying VARSTR97 and VARPSU97 as the variance estimation strata and PSUs (within these strata) respectively and specifying a "with replacement" design in a computer software package SUDAAN will yield the estimate of standard error of \$3.55 for the estimated mean of out-of-pocket payment.

#### Example 3 from Section 4.2

Using a Taylor Series approach, specifying VARSTR97 and VARPSU97 as the variance estimation strata and PSUs (within these strata) respectively and specifying a "with replacement" design in a computer software package SUDAAN will yield the estimate of standard error of 0.0075 for the weighted mean proportion of total expenditures paid by private insurance.

# 5.0 Merging/Linking MEPS Data Files

Data from this file can be used alone or in conjunction with other files. This section provides instructions for linking the dental file with other MEPS public use files, including: the conditions file, the prescribed medicines file, and a person-level file.

## 5.1 Linking a Person-Level File to the Dental File

Data from the dental event file can be used alone or in conjunction with other files. Merging

characteristics of interest from other MEPS files (e.g., 1997 Full Year Population Characteristics File or 1997 Prescribed Medicines File) expands the scope of potential estimates. For example, to estimate the total number of dental events of persons with specific characteristics such as age, race, and sex, population characteristics from a person-level file need to be merged onto the dental file. This procedure is shown below. The 1997 Appendix File provides additional detail on how to merge MEPS data files.

- 1. Create data set PERSX by sorting the Full Year Population Characteristics File (file HCXXX), by the person identifier, DUPERSID. Keep only variables to be merged on to the dental file and DUPERSID.
- 2. Create data set DENT by sorting the dental events file by person identifier, DUPERSID.
- 3. Create final data set NEWDENT by merging these two files by DUPERSID, keeping only records on the dental file.

The following is an example of SAS code which completes these steps:

```
PROC SORT DATA=HCXXX(KEEP=DUPERSID AGE SEX EDUC)
OUT=PERSX;
BY DUPERSID;
RUN;

PROC SORT DATA=DENT;
BY DUPERSID;
RUN;

DATA NEWDENT;
MERGE DENT (IN=A) PERSX(IN=B);
BY DUPERSID;
IF A;
RUN;
```

# 5.2 Linking the Dental File to the Medical Conditions File and/or the Prescribed Medicines File

Due to survey design issues, there are limitations/caveats that an analyst must keep in mind when linking the different files. Those limitations/caveats are listed below. For detailed linking examples, including SAS code, analysts should refer to the Appendix File.

## 5.2.1 Limitations/Caveats of RXLK (the Prescribed Medicine Link File)

The RXLK file provides a link from the MEPS event files to the prescribed medicine records on the 1997 Prescribed Medicine Event File. When using RXLK, analysts should keep in mind that one dental visit can link to more than one prescribed medicine record. Conversely, a prescribed medicine event may link to more than one dental visit or different types of events. When this occurs, it is up to the analyst to determine how the prescribed medicine expenditures should be allocated among those dental and/or medical events.

## 5.2.2 Limitations/Caveats of CLNK (the Medical Conditions Link File)

The CLNK provides a link from MEPS event files to the Medical Conditions File. When using the CLNK, analysts should keep in mind that (1) conditions are self-reported and (2) there may be multiple conditions associated with a dental visit. Users should also note that not all dental visits link to the condition file.

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# Attachment 1 Definitions

**Dwelling Units, Reporting Units, Families, and Persons** – The definitions of Dwelling Units (DUs) and Group Quarters in the MEPS Household Survey are generally consistent with the definitions employed for the National Health Interview Survey. The dwelling unit ID (DUID) is a five-digit random ID number assigned after the case was sampled for MEPS. The person number (PID) uniquely identifies all persons within the dwelling unit. The variable DUPERSID is the combination of the variables DUID and PID.

A Reporting Unit (RU) is a person or group of persons in the sampled dwelling unit who are related by blood, marriage, adoption or other family association, and who are to be interviewed as a group in MEPS. Thus, the RU serves chiefly as a family-based "survey operations" unit rather than an analytic unit. Regardless of the legal status of their association, two persons living together as a "family" unit were treated as a single reporting unit if they chose to be so identified.

Unmarried college students under 24 years of age who usually live in the sampled household, but were living away from home and going to school at the time of the Round 1 MEPS interview, were treated as a Reporting Unit separate from that of their parents for the purpose of data collection. These variables can be found on MEPS person level files.

**In-Scope** – A person was classified as in-scope (IN-SCOPE) if he or she was a member of the U.S. civilian, non-institutionalized population at some time during the Round 1 interview. This variable can be found on MEPS person level files.

**Keyness** –The term "keyness" is related to an individual's chance of being included in MEPS. A person is key if that person is appropriately linked to the set of 1995 NHIS sampled households designated for inclusion in MEPS. Specifically, a key person either was a member of an NHIS household at the time of the NHIS interview, or became a member of such a household after being out-of-scope prior to joining that household (examples of the latter situation include newborns and persons returning from military service, an institution, or living outside the United States).

A non-key person is one whose chance of selection for the NHIS (and MEPS) was associated with a household eligible but not sampled for the NHIS, who happened to have become a member of a MEPS reporting unit by the time of the MEPS Round 1 interview. MEPS data, (e.g., utilization and income) were collected for the period of time a non-key person was part of the sampled unit to permit family level analyses. However, non-key persons who leave a sample household would not be recontacted for subsequent interviews. Non-key individuals are not part of the target sample used to obtain person level national estimates.

It should be pointed out that a person may be key even though not part of the civilian, non-institutionalized portion of the U.S population. For example, a person in the military may be living with his or her civilian spouse and children in a household sampled for the 1995 NHIS.

The person in the military would be considered a key person for MEPS. However, such a person would not receive a person-level sample weight so long as he or she was in the military. All key persons who participated in the first round of a MEPS Panel received a person level sample weight except those who were in the military. The variable indicating "keyness" is KEYNESS. This variable can be found on MEPS person level files.

Eligibility –The eligibility of a person for MEPS pertains to whether or not data were to be collected for that person. All key, in-scope persons of a sampled RU were eligible for data collection. The only non-key persons eligible for data collection were those who happened to be living in the same RU as one or more key persons, and their eligibility continued only for the time that they were living with a key person. The only out-of-scope persons eligible for data collection were those who were living with key in-scope persons, again only for the time they were living with a key person. Only military persons meet this description. A person was considered eligible if they were eligible at any time during Round 1. The variable indicating "eligibility" is ELIGRND1, where 1 is coded for persons eligible for data collection for at least a portion of the Round 1 reference period, and 2 is coded for persons not eligible for data collection at any time during the first round reference period. This variable can be found on MEPS person level files.

**Pre-imputed** - This means that only a series of logical edits were applied to the HC data to correct for several problems including outliers, copayments or charges reported as total payments, and reimbursed amounts counted as out of pocket payments. Missing data remains.

**Unimputed** - This means that only a series of logical edits were applied to the MPC data to correct for several problems including outliers, copayments or charges reported as total payments, and reimbursed amounts counted as out of pocket payments. This data was used as the imputation source to account for missing HC data.

**Imputation** -Imputation is more often used for item missing data adjustment through the use of predictive models for the missing data, based on data available on the same (or similar) cases. Hot-deck imputation creates a data set with complete data for all nonrespondent cases, often by substituting the data from a respondent case that resembles the nonrespondent on certain known variables.

D. Codebooks

#### MEPS HC-016B 1997 DENTAL VISITS FILE 1

#### DATE: June 6, 2001

#### ALPHABETICAL AND POSITIONAL LISTING OF VARIABLES

#### ----ALPHABETICAL LISTING OF VARIABLES----

START	END	NAME	DESCRIPTION
104 112	105 113	ABSCESS BRIDGES	ABCESS OR INFECTION TREATMENT BRIDGES
110	111	BRIDGESX	EDITED BRIDGES
70	71	CLENTETH	CLEANING, PROPHYLAXIS, OR POLISHING
68	69	CLENTETX	EDITED CLENTETH
86	87	CROWNS	CROWNS OR CAPS
84	85 53	CROWNSX	EDITED CROWNS
52 182	183	DENTHYG DENTINJ	DENTAL HYGIENIST SEEN VISIT BECAUSE OF ACCIDENT OR INJURY
184	185	DENTINO	RECEIVE MEDICINE INCLUDING FREE SAMPLE
157	181	DENTOTHR	OTHER SPECIFIED DENTAL PROCEDURES
132	156	DENTOTHX	EDITED DENTOTHR
130	131	DENTPROC	OTHER DENTAL PROCEDURES
128	129	DENTPROX	EDITED DENTPROC
56 54	57 55	DENTSURG DENTTECH	DENTAL SURGEON SEEN DENTAL TECHNICIAN SEEN
116	117	DENTURES	DENTURES OR PARTIAL DENTURES
114	115	DENTUREX	EDITED DENTURES
64	65	DENTYPE	OTHER DENTAL SPECIALIST SEEN
1	5	DUID	DWELLING UNIT ID
9	16	DUPERSID	PERSON ID (DUID+PID)
227	232	DVCH97X	AMOUNT PAID, CHAMPUS/CHAMPVA (IMPUTED)
48	49 47	DVDATEDD	EVENT DATE - DAY
46 42	47 45	DVDATEMM DVDATEYR	EVENT DATE - MONTH EVENT DATE - YEAR
206	212	DVMD97X	AMOUNT PAID, MEDICAID (IMPUTED)
200	205	DVMR97X	AMOUNT PAID, MEDICARE (IMPUTED)
233	239	DVOF97X	AMOUNT PAID, OTHER FEDERAL (IMPUTED)
253	259	DVOR97X	AMOUNT PAID, OTHER PRIVATE (IMPUTED)
267	273	DVOT97X	AMOUNT PAID, OTHER INSURANCE (IMPUTED)
260	266	DVOU97X	AMOUNT PAID, OTHER PUBLIC(IMPUTED)
213 193	219 199	DVPV97X DVSF97X	AMOUNT PAID, PRIVATE INSURANCE (IMPUTED) AMOUNT PAID, FAMILY (IMPUTED)
240	245	DVSL97X	AMOUNT PAID, STATE & LOCAL GOV (IMPUTED)
281	287	DVTC97X	HHLD REPORTED TOTAL CHARGE (IMPUTED)
220	226	DVVA97X	AMOUNT PAID, VETERANS (IMPUTED)
246	252	DVWC97X	AMOUNT PAID, WORKERS COMP (IMPUTED)
274	280	DVXP97X	SUM OF DVSF97X-DVOT97X (IMPUTED)
60 29	61 29	ENDODENT	ENDODONTIST SEEN
29 17	29 28	EVENTRN EVNTIDX	EVENT ROUND NUMBER EVENT ID
66	67	EXAMINE	GENERAL EXAM OR CONSULTATION
100	101	EXTRACT	EXTRACTION, TOOTH PULLED
189	190	FFBEF97	TOTAL # OF VISITS IN FF BEFORE 1997
187	188	FFDVTYPE	FLAT FEE BUNDLE
30	41	FFEEIDX	FLAT FEE ID
191	192	FFTOT98	TOTAL # OF VISITS IN FF AFTER 1997
80 78	81 79	FILLING FILLINGX	FILLINGS EDITED FILLING
74 74	75	FLUORIDE	FLUORIDE TREATMENT
50	51	GENDENT	GENERAL DENTIST SEEN
94	95	GUMSURG	PERDTL SCALING/ROOT PLANING OR GUM
92	93	GUMSURGX	EDITED GUMSURG
300	300	IMPDVCHG	IMPUTATION STATUS OF DVTC97X
293 290	293 290	IMPDVCHM IMPDVMCD	IMPUTATION FLAG FOR DVCH97X IMPUTATION FLAG FOR DVMD97X
290 289	290 289	IMPDVMCD	IMPUTATION FLAG FOR DVMD97X IMPUTATION FLAG FOR DVMR97X
294	294	IMPDVMCK	IMPUTATION FLAG FOR DVOF97X
297	297	IMPDVOPR	IMPUTATION FLAG FOR DVOR97X

#### MEPS HC-016B 1997 DENTAL VISITS FILE 1

DATE: June 6, 2001

#### ALPHABETICAL AND POSITIONAL LISTING OF VARIABLES

## ----ALPHABETICAL LISTING OF VARIABLES----

START	END	NAME	DESCRIPTION
298	298	IMPDVOPU	IMPUTATION FLAG FOR DVOU97X
299	299	IMPDVOTH	IMPUTATION FLAG FOR DVOT97X
291	291	IMPDVPRV	IMPUTATION FLAG FOR DVPV97X
288	288	IMPDVSLF	IMPUTATION FLAG FOR DVSF97X
295	295	IMPDVSTL	IMPUTATION FLAG FOR DVSL97X
292	292	IMPDVVA	IMPUTATION FLAG FOR DVVA97X
296	296	IMPDVWCP	IMPUTATION FLAG FOR DVWC97X
102	103	IMPLANT	IMPLANTS
82	83	INLAY	INLAYS
72	73	JUSTXRAY	X-RAYS, RADIOGRAPHS OR BITEWINGS
186	186	NUMCOND	TOTAL # COND RECORDS LINKED TO THIS EVNT
108	109	ORALSURG	ORAL SURGERY
106	107	ORALSURX	EDITED ORALSURG
	123		ORTHODONTIA, BRACES OR RETAINERS
120	121	ORTHDONX	
58	59	ORTHODNT	ORTHODONTIST SEEN
62	63	PERIODNT	PERIODONTIST SEEN
6	8	PID	PERSON NUMBER
98	99	RECLVIS	PERIODONTAL RECALL VISIT
96	97	RECLVISX	
118	119	REPAIR	REPAIR BRIDGES/DENTURES OR RELINING
90	91	ROOTCANL	ROOT CANAL
88	89	ROOTCANX	EDITED ROOTCANL
76	77	SEALANT	
126	127		
316	317		VARIANCE ESTIMATION PSU,1997
313	315		VARIANCE ESTIMATION STRATUM, 1997
124	125		BONDING, WHITENING OR BLEACHING
301	312	WTDPER97	POVERTY/MORTALITY ADJ PERSON LEVL WGT-97

DATE: June 6, 2001

# ALPHABETICAL AND POSITIONAL LISTING OF VARIABLES

# ----POSITIONAL LISTING OF VARIABLES----

START	END	NAME	DESCRIPTION
1	5	DUID	DWELLING UNIT ID
6	8	PID	PERSON NUMBER
9	16	DUPERSID	PERSON ID (DUID+PID)
17	28	EVNTIDX	EVENT ID
29	29	EVENTRN	EVENT ROUND NUMBER
30	41	FFEEIDX	FLAT FEE ID
42	45	DVDATEYR	EVENT DATE - YEAR
46	47	DVDATEMM	EVENT DATE - MONTH
48	49	DVDATEDD	EVENT DATE - DAY
50 50	51 53	GENDENT	GENERAL DENTIST SEEN
52 54	55 55	DENTHYG DENTTECH	DENTAL HYGIENIST SEEN DENTAL TECHNICIAN SEEN
56	57	DENTITECH	DENTAL SURGEON SEEN
58	5 <i>7</i>	ORTHODNT	ORTHODONTIST SEEN
60	61	ENDODENT	ENDODONTIST SEEN
62	63	PERIODNT	PERIODONTIST SEEN
64	65	DENTYPE	OTHER DENTAL SPECIALIST SEEN
66	67	EXAMINE	GENERAL EXAM OR CONSULTATION
68	69	CLENTETX	EDITED CLENTETH
70	71	CLENTETH	CLEANING, PROPHYLAXIS, OR POLISHING
72	73	JUSTXRAY	X-RAYS, RADIOGRAPHS OR BITEWINGS
74	75	FLUORIDE	FLUORIDE TREATMENT
76	77	SEALANT	SEALANT APPLICATION
78	79	FILLINGX	EDITED FILLING
80	81	FILLING	FILLINGS
82	83	INLAY	INLAYS
84	85	CROWNSX	EDITED CROWNS
86	87	CROWNS ROOTCANX	CROWNS OR CAPS
88	89		EDITED ROOTCANL
90 92	91 93	ROOTCANL GUMSURGX	ROOT CANAL EDITED GUMSURG
94	95 95	GUMSURG	PERDTL SCALING/ROOT PLANING OR GUM
96	97	RECLVISX	EDITED RECLVIS
98	99	RECLVIS	PERIODONTAL RECALL VISIT
100	101	EXTRACT	EXTRACTION, TOOTH PULLED
102	103	IMPLANT	IMPLANTS
104	105	ABSCESS	ABCESS OR INFECTION TREATMENT
106	107	ORALSURX	EDITED ORALSURG
108	109	ORALSURG	ORAL SURGERY
110	111	BRIDGESX	EDITED BRIDGES
112	113	BRIDGES	BRIDGES
114	115	DENTUREX	EDITED DENTURES
116	117	DENTURES	DENTURES OR PARTIAL DENTURES
118	119	REPAIR	REPAIR BRIDGES/DENTURES OR RELINING
120	121	ORTHDONX	EDITED ORTHDONT
122	123	ORTHDONT	ORTHODONTIA, BRACES OR RETAINERS
124 126	125 127	WHITEN	BONDING, WHITENING OR BLEACHING
128	127	TMDTMJ DENTPROX	TREATMENT FOR TMD OR TMJ EDITED DENTPROC
130	131	DENTPROC	OTHER DENTAL PROCEDURES
132	156	DENTOTHX	EDITED DENTOTHR
157	181	DENTOTHR	OTHER SPECIFIED DENTAL PROCEDURES
182	183	DENTINJ	VISIT BECAUSE OF ACCIDENT OR INJURY
184	185	DENTMED	RECEIVE MEDICINE INCLUDING FREE SAMPLE
186	186	NUMCOND	TOTAL # COND RECORDS LINKED TO THIS EVNT
187	188	FFDVTYPE	FLAT FEE BUNDLE
189	190	FFBEF97	TOTAL # OF VISITS IN FF BEFORE 1997
191	192	FFTOT98	TOTAL # OF VISITS IN FF AFTER 1997
193	199	DVSF97X	AMOUNT PAID, FAMILY (IMPUTED)

DATE: June 6, 2001

# ALPHABETICAL AND POSITIONAL LISTING OF VARIABLES

# ----POSITIONAL LISTING OF VARIABLES----

START	END	NAME	DESCRIPTION
200	205	DVMR97X	AMOUNT PAID, MEDICARE (IMPUTED)
206	212	DVMD97X	AMOUNT PAID, MEDICAID (IMPUTED)
213	219	DVPV97X	AMOUNT PAID, PRIVATE INSURANCE (IMPUTED)
220	226	DVVA97X	AMOUNT PAID, VETERANS (IMPUTED)
227	232	DVCH97X	AMOUNT PAID, CHAMPUS/CHAMPVA (IMPUTED)
233	239	DVOF97X	AMOUNT PAID, OTHER FEDERAL (IMPUTED)
240	245	DVSL97X	AMOUNT PAID, STATE & LOCAL GOV (IMPUTED)
246	252	DVWC97X	AMOUNT PAID, WORKERS COMP (IMPUTED)
253	259	DVOR97X	AMOUNT PAID, OTHER PRIVATE (IMPUTED)
260	266	DVOU97X	AMOUNT PAID, OTHER PUBLIC (IMPUTED)
267	273	DVOT97X	AMOUNT PAID, OTHER INSURANCE (IMPUTED)
274	280	DVXP97X	SUM OF DVSF97X-DVOT97X (IMPUTED)
281	287	DVTC97X	HHLD REPORTED TOTAL CHARGE (IMPUTED)
288	288	IMPDVSLF	IMPUTATION FLAG FOR DVSF97X
289	289	IMPDVMCR	IMPUTATION FLAG FOR DVMR97X
290	290	IMPDVMCD	IMPUTATION FLAG FOR DVMD97X
291	291	IMPDVPRV	IMPUTATION FLAG FOR DVPV97X
292	292	IMPDVVA	IMPUTATION FLAG FOR DVVA97X
293	293	IMPDVCHM	IMPUTATION FLAG FOR DVCH97X
294	294	IMPDVOFD	IMPUTATION FLAG FOR DVOF97X
295	295	IMPDVSTL	IMPUTATION FLAG FOR DVSL97X
296	296	IMPDVWCP	IMPUTATION FLAG FOR DVWC97X
297	297	IMPDVOPR	IMPUTATION FLAG FOR DVOR97X
298	298	IMPDVOPU	IMPUTATION FLAG FOR DVOU97X
299	299	IMPDVOTH	IMPUTATION FLAG FOR DVOT97X
300	300	IMPDVCHG	IMPUTATION STATUS OF DVTC97X
301	312	WTDPER97	POVERTY/MORTALITY ADJ PERSON LEVL WGT-97
313	315	VARSTR97	VARIANCE ESTIMATION STRATUM, 1997
316	317	VARPSU97	VARIANCE ESTIMATION PSU, 1997

NAME	DESCRIPTION	FC	RMAT TYPE	STARTEND
DUID	DWELLING UNIT ID		5.0 NUM	15
	VALUE	UNWEIGHTED	WEIGHTE	D BY WTDPER97
	VALID ID TOTAL	31,194 31,194		286,891,834 286,891,834
PID	PERSON NUMBER		3.0 NUM	68
	VALUE	UNWEIGHTED	WEIGHTE	D BY WTDPER97
	VALID ID TOTAL	31,194 31,194		286,891,834 286,891,834
DUPERSID	PERSON ID (DUID+PID)		8.0 CHAR	916
	VALUE	UNWEIGHTED	WEIGHTE	D BY WTDPER97
	VALID ID TOTAL	31,194 31,194		286,891,834 286,891,834
EVNTIDX	EVENT ID		12.0 CHAR	<u> </u>
	VALUE	UNWEIGHTED	WEIGHTE	D BY WTDPER97
	VALID ID TOTAL	31,194 31,194		286,891,834 286,891,834
EVENTRN_	EVENT ROUND NUMBER	<del></del>	1.0 NUM	2929
	VALUE	UNWEIGHTED	WEIGHTE	D BY WTDPER97
	1 2 3 4 5 TOTAL	4,665 5,672 6,677 10,265 3,915 31,194		56,079,591 68,081,862 58,044,925 76,366,037 28,319,419 286,891,834
FFEEIDX_	FLAT FEE ID	<u> </u>	12.0 CHAR	3041
	VALUE	UNWEIGHTED	WEIGHTE	D BY WTDPER97
	-1 INAPPLICABLE VALID ID TOTAL	25,239 5,955 31,194		229,571,656 57,320,178 286,891,834

NAME	DESCRIPTION	FC	RMAT TYPE START END
DVDATEYR	EVENT DATE - YEAR		4.0 NUM 42 45
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK 1997 TOTAL	17 11 31,166 31,194	237,546 106,892 286,547,396 286,891,834
DVDATEMM	EVENT DATE - MONTH		
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK 1 - 12 TOTAL	49 3 31,142 31,194	517,818 31,433 286,342,583 286,891,834
DVDATEDD	EVENT DATE - DAY		2.0 NUM 48 49
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 - 31 TOTAL	95 3,416 6 27,677 31,194	1,091,995 30,231,447 20,634 255,547,758 286,891,834
GENDENT	GENERAL DENTIST SEEN	_	2.0 NUM 50 51
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	240 37 8 23,565 7,344 31,194	2,318,898 320,426 208,666 216,346,344 67,697,500 286,891,834
DENTHYG	DENTAL HYGIENIST SEEN		
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	240 37 8 7,509 23,400 31,194	2,318,898 320,426 208,666 75,282,408 208,761,436 286,891,834

NAME	DESCRIPTION	FC	RMAT TYP	E START EN	D
DENTTECH	DENTAL TECHNICIAN SEEN		2.0 NU	M545	5
	VALUE	UNWEIGHTED	WEIGH	TED BY WTDPER9	7
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	240 37 8 1,501 29,408 31,194		2,318,899 320,420 208,660 14,291,180 269,752,650 286,891,83	6 8 6
DENTSURG	DENTAL SURGEON SEEN	_	2.0 NU	M <u>56</u> 5'	7
	VALUE	UNWEIGHTED	WEIGH	TED BY WTDPER9	7
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	240 37 8 1,053 29,856 31,194		2,318,899 320,420 208,666 9,669,97 274,373,869 286,891,83	6 4 9
ORTHODNT	ORTHODONTIST SEEN		2.0 NU	м585	9
	VALUE	UNWEIGHTED	WEIGH	TED BY WTDPER9	7
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	240 37 8 3,967 26,942 31,194		2,318,899 320,420 208,660 35,733,40 248,310,43 286,891,83	6 7 7
ENDODENT	ENDODONTIST SEEN	_	2.0 NU	м606	1
	VALUE	UNWEIGHTED	WEIGH	TED BY WTDPER9	7
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	240 37 8 256 30,653 31,194		2,318,899 320,42 208,666 2,589,76 281,454,07 286,891,83	6 7 7
PERIODNT	PERIODONTIST SEEN		2.0 NU	м626	3
	VALUE	UNWEIGHTED	WEIGH	TED BY WTDPER9	7
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	240 37 8 644 30,265 31,194		2,318,899 320,420 208,660 6,378,200 277,665,631 286,891,83	6 9 5

NAME	DESCRIPTION	FO	RMAT	TYPE	START	END
DENTYPE_	OTHER DENTAL SPECIALIST SEEN		2.0	_NUM	64	65
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	240 37 8 417 30,492 31,194			3 2 3,8 280,2	18,898 20,426 08,666 15,145 28,699 91,834
EXAMINE_	GENERAL EXAM OR CONSULTATION		2.0	_NUM	66	67
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 14,768 16,254 31,194			6 2 137,7 147,2	84,017 55,130 08,666 66,732 77,289 91,834
CLENTETX	EDITED CLENTETH		2.0	NUM	68	69
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 12,661 18,361 31,194			6 2 120,6 164,3	84,017 55,130 08,666 81,792 62,229 91,834
CLENTETH	CLEANING, PROPHYLAXIS, OR POLISHING		2.0	_NUM	70	71
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 12,660 18,362 31,194			6 2 120,6 164,3	84,017 55,130 08,666 58,354 85,667 91,834
JUSTXRAY	X-RAYS, RADIOGRAPHS OR BITEWINGS		2.0	NUM	72	73
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 6,911 24,111 31,194			6 2 63,7 221,2	84,017 55,130 08,666 86,483 57,538 91,834

NAME	DESCRIPTION	FO	RMAT TYPE START END
FLUORIDE	FLUORIDE TREATMENT		
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 1,973 29,049 31,194	984,017 655,130 208,666 17,662,127 267,381,894 286,891,834
SEALANT	SEALANT APPLICATION		
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 424 30,598 31,194	984,017 655,130 208,666 3,919,935 281,124,086 286,891,834
FILLINGX	EDITED FILLING		
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 4,256 26,766 31,194	984,017 655,130 208,666 37,289,716 247,754,305 286,891,834
FILLING	FILLINGS		
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 4,225 26,797 31,194	984,017 655,130 208,666 37,010,330 248,033,691 286,891,834
INLAY	INLAYS		
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 56 30,966 31,194	984,017 655,130 208,666 489,240 284,554,781 286,891,834

NAME	DESCRIPTION	FC	RMAT	TYPE	START	END
CROWNSX	EDITED CROWNS		2.0	_NUM	84	85
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 2,343 28,679 31,194			6 2 22,5 262,5	84,017 55,130 08,666 27,662 16,359 91,834
CROWNS	CROWNS OR CAPS		2.0	_NUM	86	87
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 2,306 28,716 31,194			6 2 22,1 262,8	84,017 55,130 08,666 72,215 71,806 91,834
ROOTCANX	EDITED ROOTCANL		2.0	_NUM	88	89
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 1,089 29,933 31,194			6 2 9,6 275,3	84,017 555,130 008,666 71,077 72,944 91,834
ROOTCANL	ROOT CANAL		2.0	_NUM	90	91
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 1,083 29,939 31,194			6 2 9,6 275,4	84,017 555,130 08,666 13,371 30,650 91,834
GUMSURGX	EDITED GUMSURG		2.0	NUM	92	93
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 567 30,455 31,194			6 2 5,5 279,4	84,017 55,130 08,666 56,901 87,120 91,834

NAME	DESCRIPTION	FC	RMAT	TYPE	START	END
GUMSURG_	PERDTL SCALING/ROOT PLANING OR GUM		2.0	_NUM	94	95
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 540 30,482 31,194			6 2 5,3 279,7	84,017 55,130 08,666 04,452 39,569 91,834
RECLVISX	EDITED RECLVIS	_	2.0	NUM	96	97
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 314 30,708 31,194			6 2 3,0 282,0	84,017 55,130 08,666 06,155 37,866 91,834
RECLVIS	PERIODONTAL RECALL VISIT		2.0	_NUM	98	99
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 268 30,754 31,194			6 2 2,5 282,4	84,017 55,130 08,666 52,847 91,174 91,834
EXTRACT_	EXTRACTION, TOOTH PULLED		2.0	_NUM	100	101
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 1,797 29,225 31,194			6 2 14,2 270,7	84,017 55,130 08,666 91,730 52,291 91,834
IMPLANT	IMPLANTS		2.0	_NUM	102	103
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 85 30,937 31,194			6 2 8 284,1	84,017 55,130 08,666 66,913 77,108 91,834

NAME	DESCRIPTION	FC	RMAT	TYPE	START	END
ABSCESS	ABCESS OR INFECTION TREATMENT		2.0	_NUM	104	105
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED	100				84,017
	-8 DK -7 REFUSED	64 8				55,130 08,666
	1 YES	339			2,8	24,185
	2 NO TOTAL	30,683 31,194				19,836 91,834
		•				•
ORALSURX	EDITED ORALSURG		2.0	_NUM	106	107
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED	100 64				84,017
	-8 DK -7 REFUSED	8				55,130 08,666
	1 YES	159			1,3	52,795
	2 NO TOTAL	30,863 31,194				91,226 91,834
						,
ORALSURG	ORAL SURGERY		2.0	_NUM	108	109
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED	100			9	84,017
	-8 DK -7 REFUSED	64 8				55,130 08,666
	1 YES	158				38,606
	2 NO	30,864				05,415
	TOTAL	31,194			200,0	91,834
BRIDGESX	EDITED BRIDGES		2.0	NUM	110	111
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED	100				84,017
	-8 DK -7 REFUSED	64 8				55,130 08,666
	1 YES	263				52,381
	2 NO	30,759				91,640
	TOTAL	31,194			286,8	91,834
BRIDGES	BRIDGES		2.0	_NUM	112	113
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED	100				84,017
	-8 DK -7 REFUSED	64 8				55,130 08,666
	1 YES	255				59,525
	2 NO	30,767				84,496
	TOTAL	31,194			∠86,8	91,834

NAME	DESCRIPTION	FO	RMAT TYPE START END
DENTUREX	EDITED DENTURES		
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 793 30,229 31,194	984,017 655,130 208,666 6,761,307 278,282,714 286,891,834
DENTURES	DENTURES OR PARTIAL DENTURES		2.0 NUM 116 117
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 769 30,253 31,194	984,017 655,130 208,666 6,569,404 278,474,617 286,891,834
REPAIR	REPAIR BRIDGES/DENTURES OR RELINING		2.0 NUM 118 119
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 425 30,597 31,194	984,017 655,130 208,666 3,719,422 281,324,599 286,891,834
ORTHDONX	EDITED ORTHDONT		2.0 NUM 120 121
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 3,654 27,368 31,194	984,017 655,130 208,666 33,874,092 251,169,929 286,891,834
ORTHDONT	ORTHODONTIA, BRACES OR RETAINERS		
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 3,617 27,405 31,194	984,017 655,130 208,666 33,471,678 251,572,343 286,891,834

NAME	DESCRIPTION	FC	RMAT	TYPE	START	END
WHITEN	BONDING, WHITENING OR BLEACHING		2.0	_NUM	124	125
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 183 30,839 31,194			6 2 1,8 283,2	84,017 55,130 08,666 33,472 10,549 91,834
TMDTMJ	TREATMENT FOR TMD OR TMJ		2.0	NUM	126	127
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 64 30,958 31,194			6 2 4 284,6	84,017 55,130 08,666 43,854 00,167 91,834
DENTPROX	EDITED DENTPROC		2.0	NUM	128	129
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 554 30,468 31,194			6 2 5,2 279,7	84,017 55,130 08,666 68,971 75,050 91,834
DENTPROC	OTHER DENTAL PROCEDURES		2.0	_NUM	130	131
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED -8 DK -7 REFUSED 1 YES 2 NO TOTAL	100 64 8 777 30,245 31,194			6 2 7,4 277,5	84,017 55,130 08,666 60,685 83,336 91,834
DENTOTHX	EDITED DENTOTHR		25.0	CHAR	132	156
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-1 INAPPLICABLE TEXT TOTAL	30,648 546 31,194			5,2	88,235 03,599 91,834

NAME	DESCRIPTION	FO	RMAT	TYPE	START	END
DENTOTHR	OTHER SPECIFIED DENTAL PROCEDURES		25.0	CHAR	157	181
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-1 INAPPLICABLE	30,425				96,521
	TEXT TOTAL	769 31,194				95,313 91,834
DENTINJ	VISIT BECAUSE OF ACCIDENT OR INJURY		2.0	_NUM	182	183
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED	275				26,370
	-8 DK -7 REFUSED	9 15				35,686 65,496
	1 YES	603				43,701
	2 NO	30,292				20,581
	TOTAL	31,194			286,8	91,834
DENTMED	RECEIVE MEDICINE INCLUDING FREE SAMPLE		2.0	_NUM	184	185
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-9 NOT ASCERTAINED	301			2,8	64,946
	-8 DK	43			3	68,567
	-7 REFUSED	15				65,496
	1 YES	2,084				59,717
	2 NO TOTAL	28,751 31,194				33,107 91,834
	TOTAL	31,194			200,0	91,634
NUMCOND_	TOTAL # COND RECORDS LINKED TO THIS EVNT		1.0	_NUM	186	186
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	0	30,591			281,7	45,978
	1	595				66,856
	2	8				79,000
	TOTAL	31,194			286,8	91,834
FFDVTYPE	FLAT FEE BUNDLE		2.0	_NUM	187	188
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	-1 INAPPLICABLE	25,239			229,5	71,656
	1 FLAT FEE STEM	1,143				35,211
	2 FLAT FEE LEAF	4,812				84,968
	TOTAL	31,194			286,8	91,834

NAME	DESCRIPTION	FO	RMAT	TYPE	START	END
FFBEF97_	TOTAL # OF VISITS IN FF BEFORE 1997		2.0	_NUM	189	190
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	-9 NOT ASCERTAINED	6				44,367
	-8 DK	75				30,083
	-7 REFUSED -1 INAPPLICABLE	8 25,239				.86,539 571,656
	0	3,865				887,608
	1 - 50	2,001				71,581
	TOTAL	31,194			286,8	891,834
FFTOT98	TOTAL # OF VISITS IN FF AFTER 1997		2.0	NUM	191	192
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	-8 DK	66				95,126
	-1 INAPPLICABLE	25,239				71,656
	0 1 - 72	4,941 948				311,899 213,154
	TOTAL	31,194				891,834
		,				,
DVSF97X	AMOUNT PAID, FAMILY (IMPUTED)		7.2	_NUM	193	199
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	0	15,846				63,656
	\$1.00 - \$25.00	3,957				34,953
	\$25.01 - \$58.00 \$58.01 - \$108.00	3,751 3,813				93,069 11,782
	\$108.01 - \$6500.00	3,827				.88,374
	TOTAL	31,194				91,834
DVMR97X	AMOUNT PAID, MEDICARE (IMPUTED)		6.2	_NUM	200	205
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	0	31,007				344,729
	\$2.00 - \$41.00	47 48				397,264
	\$41.01 - \$60.00 \$60.01 - \$140.00	46				394,242 367,310
	\$140.01 - \$895.50	46				88,289
	TOTAL	31,194			286,8	891,834
DVMD97X	AMOUNT PAID, MEDICAID (IMPUTED)		7.2	NUM	206	212
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	0	28,745			273.2	82,598
	\$0.58 - \$34.80	682				98,682
	\$34.81 - \$49.88	549				19,351
	\$49.89 - \$81.20 \$81.21 - \$2598.40	616 602				270,640 .20,563
	TOTAL	31,194				891,834
		• -			•	-

NAME	DESCRIPTION	FC	RMAT	TYPE	START	END
DVPV97X	AMOUNT PAID, PRIVATE INSURANCE (IMPUTED)		7.2	_NUM	213	219
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	0	18,243			160.2	17,345
	\$1.00 - \$51.00	3,310				21,230
	\$51.01 - \$75.00	3,404				44,377
	\$75.01 - \$121.00	3,001				70,020
	\$121.01 - \$4999.00	3,236				38,862
	TOTAL	31,194				91,834
		5_,_5				,
DVVA97X	AMOUNT PAID, VETERANS (IMPUTED)		7.2	_NUM	220	226
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	0	31,045			285,4	16,575
	\$4.00 - \$27.33	39				30,793
	\$27.34 - \$47.50	36			3	88,039
	\$47.51 - \$87.50	37			4	05,770
	\$87.51 - \$1200.00	37			3	50,657
	TOTAL	31,194			286,8	91,834
		-			-	
DVCH97X	AMOUNT PAID, CHAMPUS/CHAMPVA (IMPUTED)		6.2	_NUM	227	232
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	0	31,112			286,1	70,436
	\$2.00 - \$40.00	21				04,632
	\$40.01 - \$54.00	21				73,008
	\$54.01 - \$108.00	20				69,168
	\$108.01 - \$995.00	20				74,590
	TOTAL	31,194			286,8	91,834
DVOF97X_	AMOUNT PAID, OTHER FEDERAL (IMPUTED)		7.2		233	239
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	_
	0	31,068				49,241
	\$5.00 - \$44.00	32				47,538
	\$44.01 - \$101.00	31				20,564
	\$101.01 - \$136.00	33				61,314
	\$136.01 - \$1000.00	30				13,177
	TOTAL	31,194			286,8	91,834
DVSL97X_	AMOUNT PAID, STATE & LOCAL GOV (IMPUTED)		6.2	_NUM	240	245
	•					
	VALUE	UNWEIGHTED	N	EIGHTE	D BY WT	
	0	31,130				65,400
	\$6.00 - \$60.00	19				07,771
	\$60.01 - \$89.00	16				92,853
	\$89.01 - \$137.00	14				20,177
	\$137.01 - \$883.42	15				05,633
	TOTAL	31,194			286,8	91,834

NAME	DESCRIPTION	FO	RMAT TYPE START END
DVWC97X_	AMOUNT PAID, WORKERS COMP (IMPUTED)	_	7.2 NUM 246 252
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	0	31,182	286,763,770
	\$50.00 - \$125.00	2	28,022
	\$125.01 - \$126.00	5	27,230
	\$126.01 - \$127.00 \$127.01 - \$1260.00	3 2	27,727 45,085
	TOTAL	31,194	286,891,834
DVOR97X	AMOUNT PAID,OTHER PRIVATE(IMPUTED)	_	7.2 NUM253259
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	0	30,808	283,727,463
	\$1.00 - \$56.00	100	794,192
	\$56.01 - \$90.00 \$90.01 - \$160.00	99 91	847,014 691,626
	\$160.01 - \$4930.00	96	831,539
	TOTAL	31,194	286,891,834
DVOU97X	AMOUNT PAID,OTHER PUBLIC(IMPUTED)		7.2 NUM 260 266
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	0	31,174	286,801,544
	\$8.70 - \$37.12 \$37.13 - \$53.94	5 5	17,060 27,916
	\$53.95 - \$75.40	6	27,313
	\$75.41 - \$1102.00	4	18,001
	TOTAL	31,194	286,891,834
DVOT97X	AMOUNT PAID, OTHER INSURANCE (IMPUTED)	_	7.2 NUM267273
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	0	30,730	283,000,843
	\$0.21 - \$58.25 \$58.26 - \$95.50	116 116	875,224 837,087
	\$95.51 - \$123.00	130	1,238,998
	\$123.01 - \$3800.00	102	939,682
	TOTAL	31,194	286,891,834
DVXP97X	SUM OF DVSF97X-DVOT97X (IMPUTED)		7.2 NUM 274 280
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	0	5,969	56,130,776
	\$1.00 - \$52.20 \$52.21 - \$77.00	6,318 6,433	54,099,236 60,872,594
	\$77.01 - \$133.00	6,189	58,762,299
	\$133.01 - \$6500.00	6,285	57,026,929
	TOTAL	31,194	286,891,834

NAME	DESCRIPTION	FO	RMAT	TYPE	START	END
DVTC97X	HHLD REPORTED TOTAL CHARGE (IMPUTED)		7.2	_NUM	281	287
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	0 \$1.00 - \$60.00	4,812 7,383				84,968 59,796
	\$60.01 - \$84.00 \$84.01 - \$145.00	5,886 6,520			56,1	52,679 66,069
	\$145.01 - \$7000.00	6,593			58,8	28,322
	TOTAL	31,194			286,8	91,834
IMPDVSLF	IMPUTATION FLAG FOR DVSF97X		1.0	_NUM	288	288
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	0 UNIMPUTED	28,912			-	30,622
	1 IMPUTED TOTAL	2,282 31,194				61,212 91,834
IMPDVMCR	IMPUTATION FLAG FOR DVMR97X		1.0	_NUM	289	289
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	0 UNIMPUTED 1 IMPUTED	30,919 275				33,086 58,748
	TOTAL	31,194				91,834
IMPDVMCD	IMPUTATION FLAG FOR DVMD97X	<del></del>	1.0	_NUM	290	290
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	
	0 UNIMPUTED 1 IMPUTED	28,745 2,449				82,598 09,236
	TOTAL	31,194				91,834
IMPDVPRV	IMPUTATION FLAG FOR DVPV97X		1.0	_NUM	291	291
IMPOVERV	VALUE	UNWEIGHTED			D BY WT	
	0 UNIMPUTED	22,797	11.	BIGHTE		23,713
	1 IMPUTED	8,397			81,6	68,121
	TOTAL	31,194			286,8	91,834
IMPDVVA	IMPUTATION FLAG FOR DVVA97X		1.0	_NUM	292	292
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WT	DPER97
	0 UNIMPUTED	30,885				17,753
	1 IMPUTED TOTAL	309 31,194				74,081 91,834

NAME	DESCRIPTION	EC	RMAT	TYPE	START	END
IMPDVCHM	IMPUTATION FLAG FOR DVCH97X		1.0	_NUM	293	293
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WTI	OPER97
	0 UNIMPUTED 1 IMPUTED TOTAL	31,078 116 31,194			96	29,889 51,945 91,834
IMPDVOFD	IMPUTATION FLAG FOR DVOF97X		1.0	NUM	294	294
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WTI	OPER97
	0 UNIMPUTED 1 IMPUTED TOTAL	31,072 122 31,194				06,850 34,984 91,834
IMPDVSTL	IMPUTATION FLAG FOR DVSL97X		1.0	_NUM	295	295
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WTI	OPER97
	0 UNIMPUTED 1 IMPUTED TOTAL	31,143 51 31,194				77,445 14,389 91,834
IMPDVWCP	IMPUTATION FLAG FOR DVWC97X		1.0	NUM	296	296
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WTI	DPER97
	0 UNIMPUTED 1 IMPUTED TOTAL	31,182 12 31,194			12	53,770 28,064 91,834
IMPDVOPR	IMPUTATION FLAG FOR DVOR97X	<u> </u>	1.0	NUM	297	297
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WTI	OPER97
	0 UNIMPUTED 1 IMPUTED TOTAL	30,959 235 31,194			1,82	56,744 25,090 91,834
IMPDVOPU	IMPUTATION FLAG FOR DVOU97X		1.0	NUM	298	298
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WTI	OPER97
	0 UNIMPUTED 1 IMPUTED TOTAL	31,174 20 31,194			2	01,544 90,290 91,834

NAME	DESCRIPTION	FORM	AT TYPE STARTEND
IMPDVOTH	IMPUTATION FLAG FOR DVOT97X	1	.0 NUM 299 299
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	0 UNIMPUTED 1 IMPUTED TOTAL	30,822 372 31,194	284,088,300 2,803,534 286,891,834
IMPDVCHG	IMPUTATION STATUS OF DVTC97X	1	.0 _NUM300300
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	0 UNIMPUTED 1 IMPUTED TOTAL	20,293 10,901 31,194	184,171,362 102,720,471 286,891,834
WTDPER97	POVERTY/MORTALITY ADJ PERSON LEVL WGT-97	12	.6 NUM301312
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	0 506.64 - 64429.54 TOTAL	636 30,558 31,194	0 286,891,834 286,891,834
VARSTR97	VARIANCE ESTIMATION STRATUM, 1997	3	.0 _NUM313315
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	1 - 254 TOTAL	31,194 31,194	286,891,834 286,891,834
VARPSU97	VARIANCE ESTIMATION PSU,1997	2	.0 _NUM316317
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	1 - 45 TOTAL	31,194 31,194	286,891,834 286,891,834

# DATE: January 23, 2001

# ALPHABETICAL AND POSITIONAL LISTING OF VARIABLES

# ----ALPHABETICAL LISTING OF VARIABLES----

START	END	NAME	DESCRIPTION
1 9	5	DUID	DWELLING UNIT ID
	16	DUPERSID	PERSON ID (DUID+PID)
69	74	DVCH97H	HHLD RPTD AMT PD, CHMP/CHPVA(PRE-IMPUTED
52	56	DVMD97H	HHLD RPTD AMT PD, MEDICAID(PRE-IMPUTED)
46	51	DVMR97H	HHLD RPTD AMT PD, MEDICARE(PRE-IMPUTED)
75	80	DVOF97H	HHLD RPTD AMT PD, OTHER FED(PRE-IMPUTED)
99	105	DVOT97H	HHLD RPTD AMT PD, OTH INSUR(PRE-IMPUTED)
57	63	DVPV97H	HHLD RPTD AMT PD, PRIV INS(PRE-IMPUTED)
39	45	DVSF97H	HHLD RPTD AMT PD, FAMILY(PRE-IMPUTED)
81	86	DVSL97H	HHLD RPTD AMT PD, STATE/LOC(PRE-IMPUTED)
106	112	DVTC97H	HHLD REPORTED TOTAL CHARGE(PRE-IMPUTED)
92	98	DVUC97H	HHLD RPTD AMT PD, UNCOL LIAB(PRE-IMPUTED
64	68	DVVA97H	HHLD RPTD AMT PD, VETERANS(PRE-IMPUTED)
87	91	DVWC97H	HHLD RPTD AMT PD, WORK COMP(PRE-IMPUTED)
17	28	EVNTIDX	EVENT ID
29	38	HHSFFIDX	HOUSEHOLD REPORTD FLAT FEE ID(UNEDITED)
6	8	PID	PERSON NUMBER
128	129	VARPSU97	VARIANCE ESTIMATION PSU, 1997
125	127	VARSTR97	VARIANCE ESTIMATION STRATUM, 1997
113	124	WTDPER97	POVERTY/MORTALITY ADJ PERSON LEVL WGT-97

# DATE: January 23, 2001

# ALPHABETICAL AND POSITIONAL LISTING OF VARIABLES

# ----POSITIONAL LISTING OF VARIABLES----

START	END	NAME	DESCRIPTION
1	5	DUID	DWELLING UNIT ID
6	8	PID	PERSON NUMBER
9	16	DUPERSID	PERSON ID (DUID+PID)
17	28	EVNTIDX	EVENT ID
29	38	HHSFFIDX	HOUSEHOLD REPORTD FLAT FEE ID(UNEDITED)
39	45	DVSF97H	HHLD RPTD AMT PD, FAMILY(PRE-IMPUTED)
46	51	DVMR97H	HHLD RPTD AMT PD, MEDICARE(PRE-IMPUTED)
52	56	DVMD97H	HHLD RPTD AMT PD, MEDICAID(PRE-IMPUTED)
57	63	DVPV97H	HHLD RPTD AMT PD, PRIV INS(PRE-IMPUTED)
64	68	DVVA97H	HHLD RPTD AMT PD, VETERANS(PRE-IMPUTED)
69	74	DVCH97H	HHLD RPTD AMT PD, CHMP/CHPVA(PRE-IMPUTED
75	80	DVOF97H	HHLD RPTD AMT PD, OTHER FED(PRE-IMPUTED)
81	86	DVSL97H	HHLD RPTD AMT PD, STATE/LOC(PRE-IMPUTED)
87	91	DVWC97H	HHLD RPTD AMT PD, WORK COMP(PRE-IMPUTED)
92	98	DVUC97H	HHLD RPTD AMT PD, UNCOL LIAB(PRE-IMPUTED
99	105	DVOT97H	HHLD RPTD AMT PD, OTH INSUR(PRE-IMPUTED)
106	112	DVTC97H	HHLD REPORTED TOTAL CHARGE(PRE-IMPUTED)
113	124	WTDPER97	POVERTY/MORTALITY ADJ PERSON LEVL WGT-97
125	127	VARSTR97	VARIANCE ESTIMATION STRATUM, 1997
128	129	VARPSU97	VARIANCE ESTIMATION PSU,1997

NAME	DESCRIPTION	FC	ORMAT TYPE	START EN	ID
DUID	DWELLING UNIT ID		5.0 NUM	1	5
	VALUE	UNWEIGHTED	WEIGHTE	D BY WTDPER9	<u>27</u>
	VALID ID TOTAL	31,194 31,194		286,891,83 286,891,83	
PID	PERSON NUMBER	_	3.0 NUM	6	8
	VALUE	UNWEIGHTED	WEIGHTE	D BY WTDPER9	<u>17</u>
	VALID ID TOTAL	31,194 31,194		286,891,83 286,891,83	
DUPERSID	PERSON ID (DUID+PID)	_	8.0 CHAR	91	L6
	VALUE	UNWEIGHTED	WEIGHTE	D BY WTDPER9	<u>17</u>
	VALID ID TOTAL	31,194 31,194		286,891,83 286,891,83	
EVNTIDX	EVENT ID	_	12.0 CHAR	172	28
	VALUE	UNWEIGHTED	WEIGHTE	D BY WTDPER9	<u>1</u> 7
	VALID ID TOTAL	31,194 31,194		286,891,83 286,891,83	
HHSFFIDX	HOUSEHOLD REPORTD FLAT FEE ID(UNEDITED)		10.0 CHAR	293	38
	VALUE	UNWEIGHTED	WEIGHTE	D BY WTDPER9	<u>1</u> 7
	-1 INAPPLICABLE VALID ID TOTAL	24,949 6,245 31,194		226,877,46 60,014,37 286,891,83	74
DVSF97H	HHLD RPTD AMT PD, FAMILY(PRE-IMPUTED)		7.2 NUM	394	15
	VALUE	UNWEIGHTED	WEIGHTE	D BY WTDPER9	17
	-9 NOT ASCERTAINED 0 \$1.00 - \$24.00 \$24.01 - \$56.00 \$56.01 - \$100.00 \$100.01 - \$6500.00	2,412 15,716 3,318 3,284 3,229 3,235 31,194		22,423,43 141,201,43 31,233,62 30,900,92 30,337,29 30,795,12 286,891,83	32 27 24 91 25

NAME	DESCRIPTION	FO	RMAT TYPE START END
DVMR97H	HHLD RPTD AMT PD, MEDICARE(PRE-IMPUTED)		_6.2 _NUM4651
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED	396 30,769	3,552,015 283,143,941
	\$2.00 - \$36.00	. 8	41,837
	\$36.01 - \$49.00 \$49.01 - \$62.00	7 7	63,782 35,821
	\$62.01 - \$394.00	7	54,437
	TOTAL	31,194	286,891,834
DVMD97H	HHLD RPTD AMT PD, MEDICAID(PRE-IMPUTED)		5.2 NUM 52 56
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED	2,490	13,820,974
	0 TOTAL	28,704 31,194	273,070,860 286,891,834
	1011111	31,131	200,031,001
DVPV97H	HHLD RPTD AMT PD, PRIV INS(PRE-IMPUTED)		
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED	9,306	89,082,353
	0 \$1.00 - \$48.00	16,285 1,464	142,947,117 13,891,537
	\$48.01 - \$70.00	1,347	13,058,781
	\$70.01 - \$118.00	1,393	13,918,711
	\$118.01 - \$4930.00	1,399	13,993,335
	TOTAL	31,194	286,891,834
DVVA97H	HHLD RPTD AMT PD, VETERANS (PRE-IMPUTED)		5.2 NUM6468
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED	442	5,323,267
	0 TOTAL	30,752 31,194	281,568,567 286,891,834
	10112	31,131	20070317031
DVCH97H_	HHLD RPTD AMT PD, CHMP/CHPVA(PRE-IMPUTED		6.2 NUM 69 74
	VALUE	UNWEIGHTED	WEIGHTED BY WTDPER97
	-9 NOT ASCERTAINED	221	1,770,892
	0 00 054 00	30,961	284,977,525
	\$13.00 - \$54.00 \$54.01 - \$81.50	7 2	61,505 46,988
	\$81.51 - \$492.00	3	34,924
	TOTAL	31,194	286,891,834

NAME	DESCRIPTION	FOR	RMAT	TYPE	START	END
DVOF97H	HHLD RPTD AMT PD, OTHER FED(PRE-IMPUTED)		6.2	_NUM	75	80
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	-9 NOT ASCERTAINED 0 \$8.00 - \$24.00 \$24.01 - \$70.00 \$70.01 - \$223.00 \$223.01 - \$388.00 TOTAL	123 31,065 2 1 2 1 31,194			286,0	95,353 33,021 13,618 12,460 24,921 12,460 91,834
DVSL97H	HHLD RPTD AMT PD, STATE/LOC(PRE-IMPUTED)		6.2	NUM	81	86
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	-9 NOT ASCERTAINED 0 \$10.00 - \$60.00 \$60.01 - \$90.00 \$90.01 - \$192.00 \$192.01 - \$610.00	53 31,128 4 3 4 2 31,194			286,4	49,660 30,129 28,852 28,399 38,162 16,633 91,834
DVWC97H_	HHLD RPTD AMT PD, WORK COMP(PRE-IMPUTED)		5.2	_NUM	87	91
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	-9 NOT ASCERTAINED 0 TOTAL	12 31,182 31,194			286,7	28,064 63,770 91,834
DVUC97H	HHLD RPTD AMT PD, UNCOL LIAB(PRE-IMPUTED		7.2	NUM	92	98
	VALUE	UNWEIGHTED	W	EIGHTE	D BY WI	DPER97
	-9 NOT ASCERTAINED -8 DK 0 \$4.00 - \$30.00 \$30.01 - \$70.00 \$70.01 - \$375.00 \$375.01 - \$1000.00	3 12 31,164 4 4 4 3 31,194			1 286,5	41,349 53,607 39,932 47,818 57,897 29,224 22,008 91,834

NAME	DESCRIPTION	FC	RMAT	TYPE	START	END
DVOT97H	HHLD RPTD AMT PD, OTH INSUR(PRE-IMPUTED)		7.2	_NUM	99	105
	VALUE	UNWEIGHTED	V	EIGHTE	D BY WTI	PER97
	-9 NOT ASCERTAINED 0 \$8.00 - \$41.00 \$41.01 - \$80.00 \$80.01 - \$185.00 \$185.01 - \$2000.00 TOTAL	380 30,722 24 23 22 23 31,194			282,91 22 29 32	29,396 91,791 25,072 11,198
DVTC97H	HHLD REPORTED TOTAL CHARGE (PRE-IMPUTED)	_	7.2	_NUM	106	112
	VALUE	UNWEIGHTED	V	EIGHTE	D BY WTI	DPER97
	-9 NOT ASCERTAINED 0 \$1.00 - \$57.00 \$57.01 - \$80.00 \$80.01 - \$147.00 \$147.01 - \$7000.00	13,078 5,030 3,338 3,259 3,232 3,257 31,194			48,14 30,79 31,68 31,18 31,18	32,602 12,632 97,016 36,350 34,064 99,170 91,834
WTDPER97	POVERTY/MORTALITY ADJ PERSON LEVL WGT-97		12.6	_NUM	113	124
	VALUE	UNWEIGHTED	M	EIGHTE	D BY WTI	PER97
	0 506.64 - 64429.54 TOTAL	636 30,558 31,194				0 91,834 91,834
VARSTR97	VARIANCE ESTIMATION STRATUM, 1997	_	3.0	_NUM	125	127
	VALUE	UNWEIGHTED	V	EIGHTE	D BY WTI	PER97
	1 - 254 TOTAL	31,194 31,194				91,834 91,834
VARPSU97	VARIANCE ESTIMATION PSU,1997		2.0	NUM	128	129
	VALUE	UNWEIGHTED	M	EIGHTE	D BY WTI	PER97
	1 - 45 TOTAL	31,194 31,194				91,834 91,834

E. Variable-Source Crosswalk

# E. VARIABLE-SOURCE CROSSWALK MEPS HC-016B: 1997 DENTAL VISITS

File 1: Survey Administration Variables

Variable	Description	Source
DUID	Dwelling unit ID	Assigned in sampling
PID	Person number	Assigned in sampling
DUPERSID	Sample person ID (DUID + PID)	Assigned in sampling
EVNTIDX	Event ID	Assigned in Sampling
EVENTRN	Event round number	CAPI derived
FFEEIDX	Flat fee ID	Constructed

# **Dental Events Variables**

Variable	Description	Source
DVDATEYR	Event start date – year	CAPI derived
DVDATEMM	Event start date – month	CAPI derived
DVDATEDD	Event start date – day	CAPI derived
GENDENT	General dentist seen	DN03
DENTHYG	Dental hygienist seen	DN03
DENTTECH	Dental technician seen	DN03
DENTSURG	Dental surgeon seen	DN03
ORTHODNT	Orthodontist seen	DN03
ENDODENT	Endodontist seen	DN03
PERIODNT	Periodontist seen	DN03
DENTYPE	Other dental specialist seen	DN03
EXAMINE	General exam or consultation	DN04
CLENTETX	Edited CLENTETH	DN04 (Edited)
CLENTETH	Cleaning, prophylaxis, or polishing	DN04
JUSTXRAY	X-rays, radiographs or bitewings	DN04
FLUORIDE	Fluoride treatment	DN04

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SEALANT	Sealant application	DN04
FILLINGX	Edited FILLING	DN04 (Edited)
FILLING	Fillings	DN04
INLAY	Inlays	DN04
CROWNSX	Edited CROWNS	DN04 (Edited)
CROWNS	Crowns or caps	DN04
ROOTCANX	Edited ROOTCANL	DN04 (Edited)
ROOTCANL	Root canal	DN04
GUMSURGX	Edited GUMSURG	DN04 (Edited)
GUMSURG	Perdtl scaling/root planing or gum	DN04
RECLVISX	Edited RECLIVIS	DN04 (Edited)
RECLIVIS	Periodontal recall visit	DN04
EXTRACT	Extraction, tooth pulled	DN04
IMPLANT	Implants	DN04
ABSCESS	Abscess or infection treatment	DN04
ORALSURX	Edited ORALSURG	
ORALSURG	Oral surgery	DN04
BRIDGESX	Edited BRIDGES	DN04 (Edited)
BRIDGES	Bridges	DN04
DENTUREX	Edited DENTURES	DN04 (Edited)
DENTURES	Dentures or partial dentures	DN04
REPAIR	Repair bridges/dentures or relining	DN04
ORTHDONX	Edited ORTHDONT	DN04 (Edited)
ORTHDONT	Orthodontia, braces or retainers	DN04
WHITEN	Bonding, whitening or bleaching	DN04
TMDTMJ	Treatment for TMD or TMJ	DN04
DENTPROX	Edited DENTPOC	DN04OV
DENTPROC	Other dental procedures	DN04OV
DENTOTHX	Edited DENTOTHR	DN04 (Edited)
DENTOTHR	Other specify dental procedures	DN04
DENTINJ	Visit because of accident or injury	DN01
DENTMED	Receive medicine including free sample	DN05
NUMCOND	Total number condition records linked to this event.	Constructed

# **Expenditure Variables**

Variable	Description	Source
FFDVTYPE	Flat fee bundle	Constructed
FFBEF97	Total # of visits in flat fee before 1997	FF05
FFTOT98	Total # of visits in flat fee after 1997	FF02
DVSF97X	Amount paid, family ( Imputed)	CP07,CP09A, CP11-CP34OV2 (Edited)
DVMR97X	Amount paid, Medicare (Imputed)	CP07,CP09A, CP11-CP34OV2 (Edited)
DVMD97X	Amount paid, Medicaid (Imputed)	CP07,CP09A, CP11-CP34OV2 (Edited)
DVPV97X	Amount paid, private insurance (Imputed)	CP07,CP09A, CP11-CP34OV2 (Edited)
DVVA97X	Amount paid, Veterans (Imputed)	CP07,CP09A, CP11-CP34OV2 (Edited)
DVCH97X	Amount paid, CHAMPUS/CHAMPVA (Imputed)	CP07,CP09A, CP11-CP34OV2 (Edited)
DVOF97X	Amount paid, other federal (Imputed)	CP07,CP09A, CP11-CP34OV2 (Edited)
DVSL97X	Amount paid, state and local gov't (Imputed)	CP07,CP09A, CP11-CP34OV2 (Edited)
DVWC97X	Amount paid, worker's comp (Imputed)	CP07,CP09A, CP11-CP34OV2 (Edited)
DVOR97X	Amount paid, other private (Imputed)	CP07,CP09A, CP11-CP34OV2 (Edited)
DVOU97X	Amount paid, other public (Imputed)	CP07,CP09A, CP11-CP34OV2 (Edited)
DVOT97X	Amount paid, other insurance (Imputed)	CP07,CP09A, CP11-CP34OV2 (Edited)
DVXP97X	Sum of DVSF97X – DVOT97X (Imputed)	Constructed
DVTC97X	Household reported total charge ( Imputed)	CP09A,CP09OV (Edited)
IMPDVSLF	Imputation flag for DVSF97X	Constructed
IMPDVMCR	Imputation flag for DVMR97X	Constructed
IMPDVMCD	Imputation flag for DVMD97X	Constructed
IMPDVPRV	Imputation flag for DVPV97X	Constructed
IMPDVVA	Imputation flag for DVVA97X	Constructed
IMPDVCHM	Imputation flag for DVCH97X	Constructed
IMPDVOFD	Imputation flag for DVOF97X	Constructed
IMPDVSTL	Imputation flag for DVSL97X	Constructed

IMPDVWCP	Imputation flag for DVWC97X	Constructed
IMPDVOPR	Imputation flag for DVOR97X	Constructed
IMPDVOPU	Imputation flag for DVOU97X	Constructed
IMPDVOTH	Imputation flag for DVOT97X	Constructed
IMPDVCHG	Imputation flag for DVTC97X	Constructed

# Weights

Variable	Description	Source
WTDPER97	Poverty/mortality adjusted person weight, 1997	Constructed
VARPSU97	Variance estimation PSU,1997	Constructed
VARSTR97	Variance estimation stratum, 1997	Constructed

File 2: Survey Administration Variables

Variable	Description	Source
DUID	Dwelling unit ID	Assigned in sampling
PID	Person number	Assigned in sampling
DUPERSID	Sample person ID (DUID + PID)	Assigned in sampling
EVNTIDX	Event ID	Assigned in Sampling
HHSFFIDX	Household reported flat fee ID	Constructed

# **Pre-imputed Expenditure Variables**

Variable	Description	Source
DVSF97H	Household reported amt. paid, family ( Pre-imputed)	CP07,CP09A,
		CP11-CP34OV2 (Edited)
DVMR97H	Household reported amt. paid, Medicare (Pre-	CP07,CP09A,
	imputed)	CP11-CP34OV2 (Edited)
DVMD97H	Household reported amt. paid, Medicaid (Pre-imputed)	CP07,CP09A,
		CP11-CP34OV2 (Edited)
DVPV97H	Household reported amt. paid, private insurance (Pre-	CP07,CP09A,
	imputed)	CP11-CP34OV2 (Edited)
DVVA97H	Household reported amt. paid, Veterans (Pre-imputed)	CP07,CP09A,
		CP11-CP34OV2 (Edited)
DVCH97H	Household reported amt. paid,	CP07,CP09A,
	CHAMPUS/CHAMPVA (Pre-imputed)	CP11-CP34OV2 (Edited)
DVOF97H	Household reported amt. paid, other federal (Pre-	CP07,CP09A,
	imputed)	CP11-CP34OV2 (Edited)
DVSL97H	Household reported amt paid, state and local gov't	CP07,CP09A,
	(Pre-imputed)	CP11-CP34OV2 (Edited)
DVWC97H	Household reported amt paid, worker's comp (Pre-	CP07,CP09A,
	imputed)	CP11-CP34OV2 (Edited)
DVOT97H	Household reported amt paid, other insurance (Pre-	CP07,CP09A,
	imputed)	CP11-CP34OV2 (Edited)
DVTC97H	Household reported total charge ( Pre-imputed)	CP09A,CP09OV
		(Edited)
DVUC97H	Household reported amount paid, uncollected liability	CP07,CP09A,
	( Pre-imputed)	CP11-CP34OV2 (Edited

# Weights

Variable	Description	Source
WTDPER97	Poverty/mortality adjusted person weight, 1997	Constructed
VARPSU97	Variance estimation PSU,1997	Constructed
VARSTR97	Variance estimation stratum, 1997	Constructed